

## GENERAL TOPICS

This pendulum aspect has other ties. It carries over to the tides in the Bay of Fundy. Everyone should make a point of seeing them, it is mind-boggling. The highest tides do not occur at perigee but about 1 or 2 days later. The draining and refilling of the Minas Basin on the bay's east end sets up a momentum effect like sloshing water in the tub. The lowest lows create the highest high tides by first providing a more-empty tub and then this emptier void allows the water to come rushing in faster and with higher momentum which results in higher highs. Opposite is also true, overly high water tends to rush out faster. You feel like you witnessed a biblical miracle seeing a vast 20 x 50 mile "ocean" fill over 50 feet in only an hour and a half...people there periodically drown. We rode the in-rushing tidal bore up the river rapids in the 'wrong' direction for 15 miles. Wild.

Regarding 7:31, I received an email from Fred Espenak in which he says Quote," "Totality: Eclipses of the Sun" (Littmann, Willcox and Espenak) quotes the theoretical maximum for the duration of totality as 7 minutes 31 seconds (page 22). This figure comes from an oral paper by Isabel M. Lewis (U. S. Naval Observatory) which she delivered at the forty-second meeting of the American Astronomical Society (1929). Unfortunately, the paper was never published but I do have the abstract for it. Lewis says (in part):

"Calculations were made to test out various combinations of circumstances with a view to obtaining the maximum duration. It appears that the most favorable combination of circumstances possible at least for some centuries to come, will occur early in the month of July; when the Sun is at or near apogee; when the Moon is at perigee and at its ascending node and its latitude is 24 minutes South; and when the observer is on the equator. A computation for such a combination gave a value of 7m31.1s with the formulae and constants employed in calculating the duration of total eclipses given in the American Ephemeris." End quote

Wasn't the USNO back then using the larger k value, 0.2724880, for the Moon diameter? If so, their max. duration times should be 4.6 seconds higher than those obtained using 0.2722810 (it is not simply the ratio of the k values). Their lower duration value would suggest they really did place the site on the equator. I most respectfully submit that the optimal site is not the equator. My results for positive 4.81 latitude duration are 7:31 using the small k value. By having the site at + 4.81 degrees latitude, although the site/shadow relative speed is 1.0028 times higher (site speed is slower), the shadow is 1.00619 times larger providing 1.7 more seconds of duration than the equatorial site.

I agree that to inspect eclipses far into the future when Earth orbit eccentricity has evolved would be changing the rules of the game and not a fair attack on the 7:31 issue.

Thank you for your forbearance of my diversion in the past week. I dislike making errors but my mistakes often are one of my personal best teachers. As the heretic who left the Church, I am now its staunchest defender of 7:31. Sincerely Raymond Brooks



## GENERAL TOPICS

From: Frank To: SEML Sent: Friday, April 06, 2001 5:17 PM Subject: [SE]

### Duistere Dag - Dark Day

On July 28, 2001 there will be another edition of "De Duistere Dag" (the Dark Day) at the public observatory Urania in Antwerp (Belgium). The main target is to discuss the results of the African eclipse observing campaign. The different members of the Belgian working group on solar eclipses will present their work and tell about their experiences. But "De Duistere Dag" is not only for members of the working group. Anyone who has interest in eclipses is welcome. We still are looking for a guest speaker to give a lecture on that occasion. If anyone is interested, please contact me (Frakke.smits@pandora.be) to discuss the topics of the lecture, financial compensation, lodging,... (Patrick, will you be there ?:)

Frank Smits Chairman of the Belgian Working Group on Solar Eclipses Frakke.smits@pandora.be phone: XX 32 15 34 00 65

From: Frank

Hi Frank, What language will be used at Duistere Dag? Best regards, Michael Gill.

Depending on the participants, it will be partly in Dutch, partly in English. Some members of the working group will present the results of their journey in Dutch, but the guestspeaker(s) of course can speak English. Since most of the participants travel worldwide to see the eclipses, they all do understand English. The film of Jean-Marc Lariviere (Shadow Chasers) will also be shown, but those who attended the Solar Eclipse Conference in Antwerp last October have already seen it. After the lectures, there will be an (informal) reception where any language can be spoken. I hope you can make it there... Frank Smits Frakke.smits@pandora.be

From: Patrick Poitevin <patrick\_poitevin@hotmail.com>

Dear Frank (and others), Why not putting all efforts together and having one general Eclipse 2001 meeting after the June Eclipse. As announced about two weeks ago, we are having Totality Day 2001 in the Open University of Milton Keynes in England on 11 August 2001. Milton Keynes is easily reachable by train, car, coach or plane from anywhere. The language is understandable for every one: English (The Dark Day which I started in Belgium was only Flanders and Holland and the only non-Flemish participants from the past were Michael Gill and Olivier Staiger). The facility at the Open University is free of charge for everyone. All latest technology is available to present anything. There will be even Live WebCam for those overseas who can not make it or for whom the cost will be too much to come over. This all, with the help of Brian Jones of the Open University, free of charge. A hotel and meals are foreseen at very democratic prices at the opposite of the Open University. And last but not least, Friday and Saturday night are informal meetings. The three lectures are not completely confirmed, but we can assure you that they will be of the same proportion and value as we had on the International Solar Eclipse Conference SEC2000 last year. For the general Eclipse 2001 presentations we have already lined up lectures from everywhere. Those who want to give a presentation, and maybe a Belgian or other country delegate, please let me know.

If you have leaflets, flyers or anything to show or trade (even when you can not attend), please let me know and we can arrange. Documentation can be sent straight to the venue. Best regards, Patrick



## GENERAL TOPICS

From: <KCStarguy@aol.com> To:  
<undisclosed-recipients: Sent: Sunday,  
April 01, 2001 7:14 PM Subject: [eclipse]  
(no subject)

Eclipse Sightings Movie video : BARAKA  
This movie made in 1992 is breathtaking.  
It is a cultural and geographic tour of the  
earth and it's animals, people, geologic  
sites and more. Soothing music invades  
your ears as you view the beautiful images.  
The beginning opens with the a monkey in  
a steaming pool. The word BARAKA then  
appears and an beautiful eclipse sun (inner  
and outer corona) appears inside the word  
and floats on it. There is a shot of the  
eclipsed sun againn later after pictures of  
clouds from a mountain top which looks  
like from the observatory in Hawaii. I am  
guessing the eclipse is of the 1991 eclipse  
shot from there. Dr. Eric Flescher  
(KCStarguy@aol.com)

From: Ron Olowin <rpollowin@STMARYS-CA.  
EDU> To: <HASTRO-L@WVNVM.WVNET.EDU>  
Sent: Wednesday, April 11, 2001 2:31 PM Subject:

### Naked-eye Sunspots

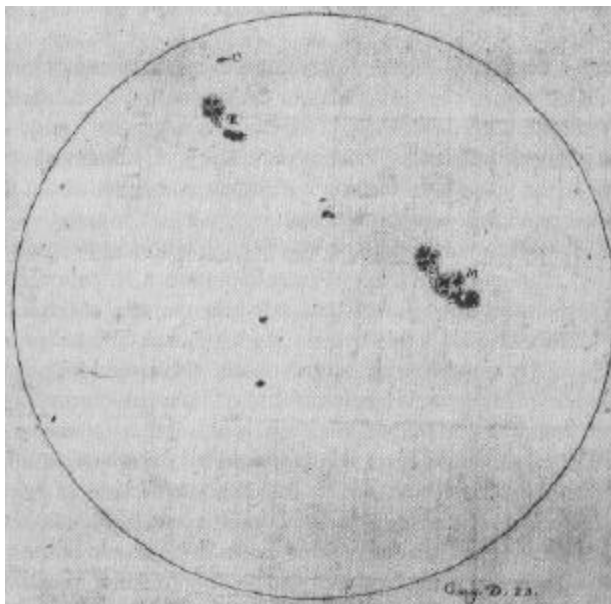
Dear Colleagues, I've been taking my classes out to  
see the recent naked-eye sunspots and mid-latitude  
auroral displays but am at a loss to explain when such  
phenomena were first recorded. I seem to recall that  
Galileo knew of naked-eye sunspots but I can't pin-  
point the source. Might any of you have suggestions  
as to where to look. With best wishes and thanks in  
advance, -- Ron Olowin

From: Peter D Hingley <pdh@RAS.ORG.UK>  
Dear Ron, See the work of Stephenson et al for  
Chinese naked eye sunspot records. For what is  
very probably the earliest WESTERN image / re-  
cord, of an image from th Chronicle of John of  
Worcester, of a sunspot on 1128 December 8, see  
Stephenson and Willis 'The Earliest Drawing of  
Sunspots', Astronomy and Geophysics vol 40 part  
6, 1999 December, pp 21-22. How's that for start-  
ers ? Peter D Hingley

From: Zik Yaakov <zikya@ATTGLOBAL.NET>  
Dear Ron Olowin, Please look at Galileo's second letter on  
sunspots (Drake (1957), 113-118). Best, Yaakov.

From: Thomas Schmidt <schmidt@HOKI.IBP.FHG.DE>

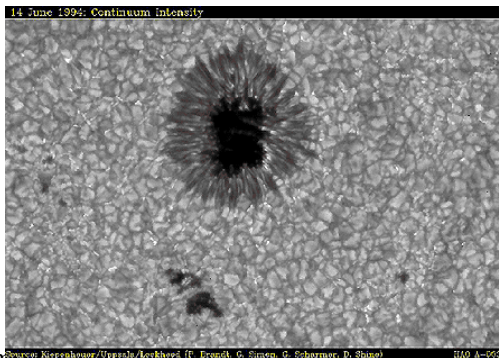
A very early Western report of a sunspot sighting (although



it was not recognized as such) \_may\_ be in the Carolingian  
"Imperial Annals" for the year 807 [my ad-hoc translation]:

"Also, on March 17 Mercury appeared in front of the Sun  
like a small black spot, a little above its center, and was seen  
by us for eight days. However, we were not able to deter-  
mine when it entered and exited the Sun, because of clouds."

Of course, this could not really have been Mercury, but a  
large sunspot (group) might fit the description.



From: R.L. van Gent <R.L.vangent@PHYS.OC.NL>  
R.L. Bray & R.E. Loughhead, \_Sunspots\_ (Chapman &  
Hall Ltd., London, 1964), p. 1, refer an even earlier Western

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report of naked-eye sunspots in the works of Theophrastus of Athens (c. 370-290 BC). They do not identify the work but if memory serves me well it was either in his *\_De ventis\_* or in his *\_De signis tempestatum\_*.

On p. 12 they refer to the following publications:

G. Sarton, "Early Observations of the Sunspots", *\_Isis\_*, vol. 37 (1947), 69-??.

D.J. Shove, "The Earliest Dated Sunspot", *\_Journal of the British Astronomical Association\_*, vol. 61 (1950), 22-??.

From: Alistair Kwan <a.kwan@HPS.UNIMELB.EDU.AU>

A brief history of observations, with pictures:

[http://www.hao.ucar.edu/public/education/sp/great\\_moments.html](http://www.hao.ucar.edu/public/education/sp/great_moments.html)

The drawing attributed to John of Worcester (1128) shows remarkable detail.

Theophrastus is also listed on this web page as recording sunspots.

Alistair Kwan a.kwan@hps.unimelb.edu.au / a.kwan@queens.unimelb.edu.au

From: Peter D Hingley <pdh@RAS.ORG.UK>

Dear Robert - many thanks for this most useful reference. I stand corrected - but the John of Worcester one is stunning !  
Peter D Hingley

From: R. D. Purrington <rdp@ROSEBUD.PHY.TULANE.EDU>

I may be repeating information (if that is indeed what it is) that has already been posted, but is it not true that Kepler saw a naked-eye sunspot group, but thought he was seeing a transit of Mercury? I don't recall where I read that, but perhaps someone can add to this...or already has. dan purrington tulane

From: Rolf Sinclair <rolf@SANTAFE.EDU>

Hi Ron et al.: There is a fine history of observations of the aurora in "Majestic Lights: the Aurora in Science, History, and the Arts", by R. H. Eather (Am Geophysical Union, Washington DC, 1980). Rolf

From: Dennis Duke <d Duke@SCRI.FSU.EDU>

The story of Kepler's mistaking sunspots for a transit of Mercury is related on pages 166-7 of the biography of Kepler by Max Caspar. The event occurred on May 28, 1607, near the day when Kepler's calculations were predicting a lower conjunction with the sun. Caspar writes:

" It did not take long for him [Kepler] to realize his error...'Lucky I,' Kepler later exclaimed, 'who was the first in this century to have observed the spots.' Because of his erroneous interpretation of the phenomenon he took shelter behind the utterance, still valid today: 'How very changeable is the fortune of war in astronomy too, since the movable army of conjectures, with vacillating assurance, turns now here now there.' "

...'still valid today,' indeed... I may be repeating information (if that is indeed what it is) that has already been posted, but is it not true that Kepler saw a naked-eye sunspot group, but thought he was seeing a transit of Mercury? I don't recall where I read that, but perhaps someone can add to this...or already has. dan purrington tulane

ca. 800 BC: The first plausible recorded sunspot observation

Sunspots are concentrations of strong magnetic fields piercing the solar photosphere. Visually, they look like dark bluish-black marks on the solar disk (see slide 1 and slide 3 of the HAO slide set). Most sunspots are too small to be readily visible by naked eye observations, but some reach a size sufficient to be visible without a telescope, under suitable viewing conditions (for example, when the sun is partially obscured by fog or thick mist, or clouds). Because of their possible astrological significances, reports of naked-eye sunspot observations are indeed to be found in many ancient chronicles and court chronologies.

The two oldest record of a sunspot observation are found in the Book of Changes, probably the oldest extant Chinese book, compiled in China around or before 800 BC. The text reads "A dou is seen in the Sun", and "A mei is seen in the Sun". From the context, the words (i.e., Chinese characters) "dou" and "mei" are taken to mean darkening or obscuration.

## GENERAL TOPICS

From: Olivier Staiger Sent: Monday, April 23, 2001 7:21 PM Subject: [eclipse]

### **Montreal, HongKong, Toronto**

when is the next total solar eclipse visible from Montreal and when from Hong-Kong ? Or very close ? Olivier "Klipsi" Staiger, Geneva Switzerland

From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM>

sorry, I meant to ask when the next TSE is in Toronto, not Montreal

From: Eric Pauer <pauer@bit-net.com>

Looks like Toronto is at the northern limit of the total solar eclipse of 8 April 2024. Depending on the trend of Delta T 23 years from now, Toronto might shift just inside or outside of the path of totality. This eclipse will also be the next one to cast the moon's umbra upon my home state of New Hampshire. Eric

From: Skywayinc@aol.com

April 8, 2024. Montreal is actually located on the southern limit of totality. -- joe rao

From: Bob Morris <morris@sce.carleton.ca>

According to EMAPWin, Toronto is just outside of the path of the 2024 eclipse.

But, like the 1925 eclipse bisected Manhattan Island, the 2024 eclipse appears to bisect Montreal Island!

The southern tip of Quinte Island (Prince Edward County) is the optimum point in Ontario to observe the eclipse from, and I have made my reservations already. :-)

Problem is, it's the day after my 82 birthday! So no guarantees. Bob Morris

From: Pierre Arpin

You're right and only the southern part of the city is in the path of totality. At most on the island of Montreal you get 65 sec of totality in city of La Salle in front of Lachine rapids.

I will have 76 for that one and hope not to be too senile to observe it. :-)

From: Crocker, Tony (FSA) <Tony.Crocker@transamerica.com>

When I first checked out 2024 TSE on Emapwin, I noticed centerline is very close to Jay Peak, Vt. (very close to Canadian border with a tram to the top of the mountain). Keep close tabs on weather reports as Jay is the snowiest spot in North America east of the Rockies, averaging 334 inches per year. This season they had over 500 inches of snow. For many of us, this will be the only chance of our lifetimes to ski and observe a TSE at the same location (excepting serious mountaineering expeditions like Mt. Elbrus 2006). Stowe (Mt. Mansfield) and a few other northern Vermont and southern Quebec areas are also within 2024 totality.

On a recent trip to Montana, I heard about some ski patrollers who observed the 1979 TSE from the Ridge at Bridger Bowl.

From: Pierre Arpin

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I checked on a topographic map that the Mount Megantic observatory is almost on the centerline.

From: Carton, WHC <Wil.Carton@corusgroup.com>

Hi Bob, 8 april 2024 is one day after your 82 birthday, and two days after my 82 birthday! Let me join to your reservation over there and together make a great feast! Wil Carton, Netherlands.

From: Peter Tiedt <Peter.Tiedt@npc-eagle.co.za>

And April 8 2024 IS my 78th birthday Shall we plan a bigger party??

From: Jean Meeus <JMeeus@compuserve.com>

Olivier Staiger asked when will be the next total solar eclipse at Montreal and at Hong-Kong.

Montreal : the next TSE will take place on 2024 April 8, and the next one on 2205 July 17.

Hong-Kong : this is more problematic. I did the calculation for the years 2000 to 2500, but found no total eclipse. For years in the far future, the problem is that the famous quantity Delta T cannot be accurately predicted. And for Hong-Kong there is the additional problem : as far as I can see from a map, Hong-Kong is not a town, but a region. So, what point of that country should be considered? I didn't investigate this further. Jean Meeus



From: Dave Balch To: Solar Eclipse Listserv Sent: Friday, April 27, 2001 11:45 PM Subject: [SE]

### Printing eclipse maps

Hello everyone, I would like to be able to print maps of selected areas of selected eclipses... what can I use to do this? Better yet, I'd like to create GIF or JPG files showing the eclipse maps that I can then include in Word documents. Any suggestions? I have Eclipse Complete and WinMap... can they do this? I'm not too sure (obviously) how to use them. Thanks, Dave

From: Dave Balch <daveb@afew.com>

I just found out that there might have been some trouble with my posting last week, so I'll try again...

How can I generate maps of eclipses (any eclipse I choose, past or future) and then create JPG/GIF/TIFF files of those maps? At the very least, I would like to be able to print them, then I could scan those, but creating the graphic files directly would obviously be best.

I have EclipseComplete and emapwin (1.2.1)... I know I can generate the maps with them, but can I create the graphic files or print them? Thanks for any help you can give me, either privately or on the list! Dave

From: Bob Morris <morris@sce.carleton.ca>

Dave, Just send for a copy of my book, "How I made Big-time Money Giving Small-time Advice"!

Actually, alt-printscreens will copy the screen onto the clipboard, under Windows 95 at least. :-)

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Then go to directly to an image manipulation program. Invoke the "paste" function and the image should appear as a new object which can then be saved as a file.

I use Photo Impact, but I suspect most image programs will do this. You can then crop, reverse etc the image. Bob Morris

From: Madden.G <iluvex@netacc.net>

Download a shareware version of Snag-It. You can forget about print screen. Snag-It lets you capture any portion that you want and has many output options. You can also add text etc to the output. madden/rochester

From: Evan Zucker <ez@MrTotality.com>

You don't need a third-party program. Just use Paint, which comes with all versions of Windows. It obviously has fewer image manipulation features than third-party programs, but it's a free way to print or save graphic images. Evan H. Zucker San Diego, California

From: Olivier Staiger <olivier.staiger@span.ch>

as a fast and free and powerful graphic viewer software I recommend , eyes wide shut , IRFANVIEW ! go [www.irfanview.com](http://www.irfanview.com) , download it, play it, use it. Excellent software. If you want to add text in file: save file as bitmap file, then use MS Paint to add text , and then save that bitmap file as gif again.

From: Crocker, Tony (FSA) <Tony.Crocker@transamerica.com>

I remember asking this same question about a year ago. To refresh my memory I just tested MS Paint on an Emapwin map. The .jpg and .gif images lost a lot of detail and text became barely readable. Save as 256 color .bmp file worked well, but the file size was 452K.

## SOLAR FLARES

From: Kidinvs@aol.com To: SOLARECLIPSES@aula.com Sent: Tuesday, April 03, 2001 7:07 PM Subject: [SE] Solar Flares....

This should be good for coronas.....

.c The Associated Press

BOULDER, Colo. (April 2) - Forecasters said a solar flare Monday was the most intense they have seen in the current 11-year-solar cycle.

Space weather forecasters had to estimate its intensity, X-22 on a scale that only goes to 20, after sensors on a National Oceanic and Atmospheric Administration satellite could no longer measure it. They said the measurement could be off by plus or minus 2.

The flare caused static on radio frequency used to navigate boats and planes. Pilots in northern regions of the globe Monday were kept waiting for takeoff after the flare occurred at 5:52 p.m. EST, said NOAA space weather forecaster Craig Sechrest.

A solar flare is an eruption on the surface of the sun that releases radiation and particles toward the earth.

AP-NY-04-02-01 2317EDT Copyright 2001 The Associated Press. The information contained in the AP news report may not be published, broadcast, rewritten or otherwise distributed without the prior written authority of The Associated Press. All active hyperlinks have been inserted by AOL.

## GENERAL TOPICS

From: Carton, WHC <Wil.Carton@corusgroup.com> To: <SolarEclipses@aula.com> Sent: Monday, April 09, 2001 11:05 AM Subject: [SE]

### Videotape 'Awesome' demanded

Eclipse fans, Can anybody help me and purchase for me the videotape (VHS-PAL) 'Awesome' showing the solar eclipse of 11th August 1999 from Engeland to Romania, 52 minutes, English text. As compensation for who finds a copy and send it to me, I promise to send a copy of the book "Eclipses in the Second Millennium B.C.", Prof. G. van den Bergh, Haarlem, 1954. This is a study of periodicity of certain aspects of eclipses, and with the help of seven different solar eclipses of Oppolzer's "Canon of Eclipses" mr. G. van den Bergh derived the relevant data of one "new" solar eclipse. The book contains text, tables and maps of most of the in this manner reconstructed ancient solar eclipses in the period 1600 BC - 1200 BC. Regards, Wil Carton

From: Madden.G <iluvex@netacc.net>

Is this tape that rare? Who produced it? Is it not available from some distributor?

I would like a copy as well. Someone should know something about it. madden/rochester

From: Eric Pauer <pauer@bit-net.com>

I found the video for sale on a Swiss video site (using <http://www.google.com>). The site is in German:

<http://www.video.ch/video>

Search on "Awesome" and you'll find:

ECLIPSE 99-AWESOME OFFICIAL VIDEO..

Genre/Thema: Documentary: General

Sprache/Language: english

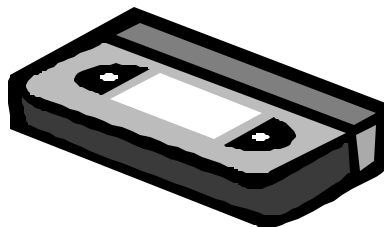
Altersklasse: E

Vertrieb: CONTENDER PRODUCTIONS

Bestellnummer: CTD11064

Typ: Videokassette (PAL)

Preis: 35.- CHF



35 Swiss Francs is about \$20.40 USD. I'd be interested in hearing comments on the video if anyone on the list gets it. Regards, Eric

From: McCann, Stephen <stephen.mccann@roke.co.uk>

Hi Eric and all, ...and to find it here in the UK :-

<http://www.videostreet.co.uk>

then type 'awesome' into the quick search box.

The 'story line' reads :- This souvenir video both chronicles and explains the final solar eclipse of the millennium, which took place at 11.09 on August 11th, 1999. Every moment of this natural phenomenon is captured on film, and computer animated graphics are used to explain the various stages and mechanics of the eclipse. Brian Blessed narrates.

Cost is £ 9.49 (free shipping to the UK) (~\$15) which appears to be a little cheaper than the site Eric mentioned.

Video Format: VHS / Normal

Catalogue Number: CTD11064

Barcode: 5030305110642

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Release Date:06 Sep 1999

Label Name:Contender

Kind regards Stephen McCann Southampton, UK

From: F.Podmore <podmore@science.uzac.zw>

Could someone who has actually seen this video give us a review of it? Is it worth buying?? Thanks, Francis

From: Eric Pauer <pauer@bit-net.com>

Thanks Stephen. I ordered a copy of "Awesome - The Official Video of the 1999 Eclipse" and I'm having it sent to me in the U.S. for £13 (including shipping). After I get my copy in 10-15 days, I post a review to the SE list. Eric

From: Don Goldstein <dg@methow.com>

Eric, I had understood that VHS videos purchased in Britain and elsewhere in Europe are in the PAL format rather than the NTSC format used in the USA and Canada. I see that the videostreet website labels "Awesome..." as "VHS / Normal". Did you check into the format question? What does "Normal" mean? Do you expect to be able to play the video on a VCR purchased in the USA (assuming that's what you have) without conversion? Please let me and others on the list who might be interested in "Awesome..." (and/or other European eclipse videos) know what you have learned. Thanks. --Don Goldstein

From: John Tilley <john@tilley.demon.co.uk>

There are three video formats that use VHS tapes in general use on our planet - so if you buy eclipse videos recorded in countries other than your own - be careful! The most common formats are:

- NTSC - USA, Canada and Japan
- PAL - Most of Europe, S America, India and China
- SECAM - France

As to whether your video recorder can/can't play other formats - it depends how much you paid for it - I would suggest that cheaper/older video recorders will only handle one format, mine will play back videos in both PAL and NTSC - but won't record NTSC and it doesn't touch SECAM.

The well known technical phrase "RTFM" comes to mind.

If you have a PAL format tape then there are two recording speeds - Normal/Fast - so "the "Normal" in your note refers to the recording speed.

<http://www.ee.surrey.ac.uk/Contrib/WorldTV/broadcast.html> is a good introduction to video formats and which countries use what. Happy video watching - John Tilley

From: Helen Griffiths <helen\_griffiths@mindlink.bc.ca>

Has anyone seen the video? A while back a few were hoping to get it but I haven't run across any reviews from folks on the list. Please let us know. Thanks, Helen

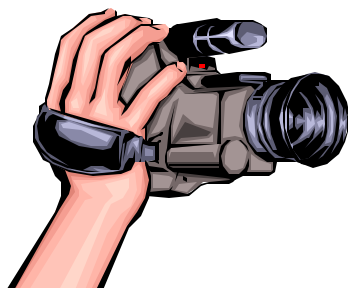
## General Topics

### LIVE Cam for Totality Day 2001

From: Patrick Poitevin <patrick\_poitevin@hotmail.com> To: SE Mailing List <SOLARECLIPSES@AULA.COM> Sent: Saturday, April 14, 2001 5:01 PM Subject: [SE] Wanted: LIVE Cam for Totality Day 2001

Dear All, At Totality Day 2001, August 11, there will be the possibility of Live WebCam. A telephone line is available for the whole day. While Mr. Live WebCam (Olivier Staiger) is not available, we are looking for some one who can bring Totality Day 2001 live on the internet for those who can not attend.

For those who want to give a presentation on Totality Day 2001, please let us know. Of course, the presentation should be in relation with the June 21 Eclipse. Participation is free of charge for everybody. Also for those who have solar eclipse related trade. Please contact us for details.



PS: The three guestspeakers will be announced soon. Best regards, Patrick

From: Scott <hdemann@yahoo.com> To: <SOLARECLIPSES@AULA.COM> Sent: Thursday, April 12, 2001 11:13 PM Subject: [SE]

#### Where can I get sun filters for my binoculars

Hola all, I was hoping that someone on the list knows where I can get some quality sun-filtering lens caps for my binoculars???

I heard that Mr. Tuthill (who is well known for these) has passed on, and I am not aware of anyone who provides these...

Bought my plane tix for 24 days in Zambia yesterday!!!  
Thank You, Scott

From: Mark <rainbowsymphony@rainbowsymphony.com>  
Give Thousand Oaks Optical a call at (805) 491-3642 Mark Rainbow Symphony, Inc. <http://www.rainbowsymphony.com>

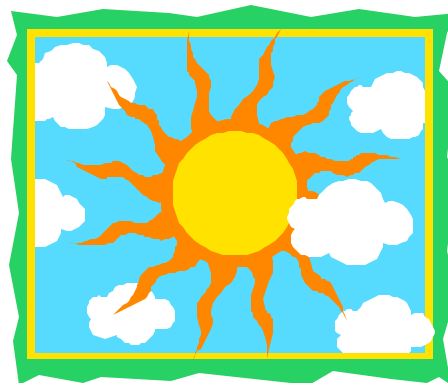
From: Olivier Staiger <olivier.staiger@span.ch>

Hola amigo, check out [www.thousandoaksoptical.com](http://www.thousandoaksoptical.com)

From: Dave Balch <daveb@afew.com> To: Solar Eclipse Listserv <SOLARECLIPSES@AULA.COM> Sent: Monday, April 30, 2001 11:43 PM Subject: [SE] You're all invited

I would like to invite anyone who can make it to my next presentation of "WOW! The Most Incredible Thing You'll Ever See!".

It will be on Friday, May 11 at Chapman College in Santa Ana, California for the Orange County Astronomers. Here is a link to their announcement of the program, complete with a map to the auditorium. If any of you from the list can make it, please introduce yourselves to me... I look forward to meeting you! <http://www.chapman.edu/oca/nextmeet.html> Dave



# AFRICA 2001

From: Evans Lampi To: SOLARECLIPSES@AULA.COM Sent: Wednesday, April 18, 2001 1:38 PM Subject: [SE]

## **Accomodation available in Zambia**

Hello, I just wanted to inform those who may still be looking for accommodation in Lusaka that some 80 Hostel rooms ranging from US\$15 to US\$25 per night (inclusive of breakfast) are available. They are a Pilot and Plane engineers college (called ZASTI), which will be closed during the week of the eclipse. The college is situated about 2 km from the Lusaka International Airport and about 10 km from the main city of Lusaka. As a member of the eclipse coordinating committee I have inspected the rooms and they are clean enough for a short visit. For more information you can contact me at [elampi@go.com](mailto:elampi@go.com) or visit a website <http://www.tmgcarhi.co.zm/rooms.htm> Thanks. Evans Lampi University of Zambia Department of Physics P.S. Any questions concerning scientific expeditions can be channelled through me to the main coordinating committee

From: Mas de Granier

We are searching all those who have a disponibility of viewers or protection glasses for the total solar eclipse of June 21 in Madagascar ? 1999: we have collected in cooperation with some newspapers and a small number of opticians here in Southern France more than 10'000 protection glasses. As we intent to go to Madagascar we would be happy to take some more of this solar viewers. Could you help us ?? Hannes Lammler AAFM 0033 681 08 08 59 [lmcrau@wanadoo.fr](mailto:lmcrau@wanadoo.fr)

From: <Rayabrooks2@cs.com> To: <SOLARECLIPSES@aula.com> Sent: Saturday, April 28, 2001 8:23 PM Subject: [SE]

## **HERE IT COMES !**

While we wait for the umbra less than two lunar months away, let's have some fun..where is the umbra's apex between now and then. If space were extremely dusty like an old attic with the sunlight shining through the window we could see the shadow neck down to a point as it circles Earth over the months. Follow it over the next eight weeks as mapped out below.

We just had new moon last Monday, with the umbra axis passing about 2 Earth diameters below Earth and the apex about an Earth radius short of reaching Earth's surface (so a 1:38 annular eclipse if it had the same gamma value as June 21). Today, April 28 the apex is off to the left of the Moon near Regulus; Full Moon May 7 the apex would swing from left to right of the Moon only a degree beneath and a quarter million miles behind it; Last quarter May 15 off to the right of the Moon near Mars.

New Moon May 23 has the umbra passing one and a half Earth diameters under Earth's bottom and the apex reaching a bit beyond the center of Earth. If it had passed at the same gamma value as June 21 the total (greatest) eclipse would have been almost exactly 2 minutes.

Last month to eclipse First Quarter May 29 it is 15 NW of Spica to the left of the Moon, Full Moon June 5 it would appear only a Moon diameter beneath the Moon almost a lunar eclipse; Last Quarter June 15 to the Moon's right about halfway between Altair and Fomalhaut, then June 21 "Lights Out!" as it tries to bore a hole through Earth and reach an Earth radius beyond the midnight bulge of Earth.

Regarding a name: Maybe a uniquely shaped prominence will name this eclipse. Raymond Brooks



From: <Jay.M.Pasachoff@williams.edu> To: <SOLARECLIPSES@AULA.COM> Sent: Monday, April 23, 2001 8:28 PM Subject: [SE] **my reconnoitring trip to Lusaka**

See a description of my recent reconnoitring trip to Lusaka at [www.williams.edu/astronomy/eclipse01](http://www.williams.edu/astronomy/eclipse01) and click on the link near the top. Text and photos are included. Jay Pasachoff [jay.m.pasachoff@williams.edu](mailto:jay.m.pasachoff@williams.edu)

From: Jean De Weerd [<j.deweerd@planetinternet.be>](mailto:j.deweerd@planetinternet.be)

Thanks Jay, I really appreciate your work to share your experience and information. J. DeWeerd [DeWeerd@pi.be](mailto:DeWeerd@pi.be) I'm gonna be in Lusaka.

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From: Hole in the Sky Tours <eclipse98@earthlink.net> To: Patrick Poitevin <patrick\_poitevin@hotmail.com> Sent: Sunday, April 01, 2001 6:52 PM Subject: Re: [eclipse]

### April's Solar Eclipse Calendar

Dear Eclipse Enthusiast,

Thank you for asking about one of Hole in the Sky Tours upcoming trips to view a Total Solar Eclipse. We are excited about our June 21, 2001 Eclipse-Safari trip which combines a great vacation to Africa with the magic of a Solar Eclipse. If you are serious about going on this trip, you should call Bev or Georgia right away at 800-782-5545 in the US and 916-922-5500 outside of the US to make your reservation right away. We may have a couple of spaces left at the time of this writing.

We are in the process of planning our Costa Rica Annular Eclipse Winter get-away for the week of December 9th, 2001. It will be a 'light adventure-style' trip in the warmth of the Central American sun! Details will be posted on the web page soon.

The 2001 eclipse plans will probably take us to Australia even though the eclipse duration is shorter than in Africa. Many Hole in the Sky customers will be with us in Africa and have expressed an interest in going someplace different. Seeing new places is more than half of the excitement of chasing eclipses!

Finally, for those of you interested in Antarctica, very preliminary plans are underway for this somewhat difficult undertaking. The eclipse comes 'a little early' in the season, and logistically it will be difficult as the eclipse is on the opposite side of the continent from

where most tours go. Fortunately, we still have a couple of years to work on it!

Thank you for your interest in our Tours. Please forward this email to any of your friends who you think would enjoy the awesome beauty of a Total Solar Eclipse and the chance to stand in 'the shadow of the moon'!!

Clear Skies, Jerry Hole in the Sky Tours [www.holeinthesky.com](http://www.holeinthesky.com)

From: Jabb the Hutt To: eclipse@hydra.carleton.ca Subject: [eclipse] eclips zambia

seeking contact with someone who also goes to Zambia for the eclips

From: Olivier "Klipsi" Staiger

I'll be there, June 15-22. contact [olivier.staiger@span.ch](mailto:olivier.staiger@span.ch)  
Where do you live ?

From: Kevin Hand <khand@cosmoseducation.org>  
To: <SOLARECLIPSES@AULA.COM> Sent: Saturday, April 28, 2001 10:57 AM Subject: [SE]

### inspired

Hello All, Well, this is my first posting to this list and it was largely motivated by the recent topic of naming the eclipse.

However, the primary reason for sending this email is to invite any and all of you to our eclipse conference in Lusaka, Zambia (June 19-21). Fred emailed out about this a while ago, but I want to personally invite you all and encourage you to send me information on friends, scientists, teachers, students, in Africa whom we should specifically invite to the event. In brief, the conference is focused on science and technology education in Africa....what better occasion than a solar eclipse to focus on these issues? Registration is free.

I will keep this email brief and simply refer you to sites that have more detail on our project....<http://www.cosmoseducation.org> and <http://www.africaneclipse.org>. These sites will be changing over the weekend ( a conference agenda will go up, along with maps etc. Currently, the site is focused on fundraising...we are still raising money, but we now have enough to make everything happen, thus the site will now shift to more of an operational mode).

With regard to the eclipse name, I am inspired: How about we let the children and students of Africa decide? It dawned on me this morning as I read Oliver Staiger's kiswahili "hakuna coronata" that our 'Under African Skies' eclipse conference will be a great opportunity to hold a contest for the best name. Zambia, as



### UNDER AFRICAN SKIES

An Educational Conference to Celebrate the  
First African  
Solar Eclipse of the Millennium


University of Zambia  
Lusaka, Zambia  
June 19th - 21st, 2001

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COSMOS EDUCATION, THE UNIVERSITY OF ZAMBIA, AND THE  
UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS PRESENT:



**Under African Skies**  
June 19-21, 2001  
University of Zambia, Lusaka, Zambia

**Celebrate the Cosmos!**  
**An Educational Conference on Space, Science,  
and Technology for All African Teachers,  
Students, and Citizens**

Registration is Free, visit our website or contact the local organizing committee:  
Cosmos Education: <http://www.cosmoseducation.org>,  
email: Kevin Hand, [khand@cosmoseducation.org](mailto:khand@cosmoseducation.org)  
Local Organizing Committee:  
Shalala Oliver Sepiso, UNZA, President 5-27: [sepiso@cosmoseducation.org](mailto:sepiso@cosmoseducation.org)  
Professor Peter Nsombo, School of Engineering, UNZA: [nsombo@cosmoseducation.org](mailto:nsombo@cosmoseducation.org)  
Professor H.W. Mweene, Dept. of Physics, UNZA: [mweene@cosmoseducation.org](mailto:mweene@cosmoseducation.org)

Graphical design by Peter F. Hand/Eclipse map courtesy of Fred Espenak

*(Continued from page 42)*

many of you probably know, is one of the most diverse countries in terms of different dialects and languages, thus I hope we get a range of interesting entries from young students at our conference. We were planning on handing out prizes (books and toys donated by our sponsors) for artwork relating to the cosmos....now we can do that and have prizes for naming the eclipse. We will construct a diverse panel to judge the entries - professors from the University of Zambia, teachers from Tanzania and Kenya, MAYBE an American and European...

Also - if you have any old books, etc that you would like to donate to schools in southern Africa, please let us know. With an eye on the Moon, Kevin Hand

From: Massimiliano Lattanzi <m.lattanzi@unesco.org> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, April 25, 2001 6:10 PM Subject: [SE] **Nouvelles Frontieres goes to Zambia !**

Hi all, This information should be of help for those who are living in France (or even Northern Europe) and, for reasons of schedule or flight availability, lost the hope to see the eclipse.

The tour operator Nouvelles Frontieres (<http://www.nouvelles-frontieres.fr>) has some seats still available for an "overnight blitz" (June 19 evening to June 21 evening!)

A Boeing 747 of Corsair will leave Orly Ouest (one of Paris airports) at 21:15 of June 19, getting to Lusaka at 6:05 of June 20. From Lusaka there is a transfer (presumably by bus) to an observation camp arranged at Chisamba (60 Km N of Lusaka). After the eclipse of June 21, return to Lusaka in the afternoon and flight back from Lusaka at 21:20. Arrival in Paris is foreseen at 6:20 am of June 22. As I said, seats were still available this morning. NF accepts reservations until May 18. The price is 5.690 FF (867 Euro).

It is a real "tour de force", but it allows people as myself, who are on a tight schedule, to see the event. I am in no way involved in the organization. I just hope that somebody else will take advantage of it (as I will).

PS: Still today, I returned to NF my reservation Paris-Amsterdam-Nairobi-Lusaka on KLM from June 18 to June 24, as I imperatively have to be in Paris on June 18-19.

So if somebody wants to take advantage of a more relaxed flight, this should be also available. Reservations can be made directly on the web site of Nouvelles Frontieres.

This "Circuit Spécial Eclips de Soleil" gave me back the smile. I hope it helps somebody else too. Cheers, Max

From: Kidinvs@aol.com To: SOLARECLIPSES@aula.com Sent: Wednesday, April 18, 2001 5:12 PM Subject: [SE]

## Article...

Thought this would be of interest....

Eclipse could be turning point for Zambian tourism

By Manoah Esipisu

LUSAKA, April 9 (Reuters) - The first solar eclipse of the new millennium is being heralded as a turning point for Zambia's tourism industry, which has been undermined by regional conflicts, neglect of infrastructure and poor marketing.

The full eclipse will occur in Zambia on June 21 and will also be seen in Angola, Zimbabwe, Namibia and the impoverished Indian Ocean island of Madagascar.

A quarter century of civil war in Angola and political instability linked to a government-sanctioned invasion of white-owned farms by veterans of Zimbabwe's 1970s liberation war have handed most of the tourism benefits of the eclipse to Zambia, which lies between them.

"Because of the troubles our neighbours are facing, many international visitors are choosing Zambia for the eclipse event," Agnes Seenka, executive director of the Zambia National Tourist Board, told Reuters.

"It is a turning point for us. We are preparing for this event with total conviction, because we aim to use it to relaunch our tourism fortunes. The sector has seen tremendous growth, but this will be the real take-off," she said.

### MISFORTUNES OF NEIGHBOURS

Some government officials have looked at the misfortunes of Angola and the Democratic Republic of Congo with glee. One cabinet minister told Reuters eclipse earnings would be the first benefit for Zambia from neighbourhood woes that so far have seen only rising levels of refugees and illegal arms.

Zambia is a landlocked southern African country of 11 million people, three-quarters of whom live in abject poverty.

Seenka said tourist arrivals had risen to 574,000 last year from 141,000 in 1995, while earnings had jumped to \$91.2 million from \$35 million. But she added that the full potential of the industry was yet to be met.

More than 15,000 visitors are expected for the eclipse, spending an estimated \$15 million, industry sources said.

Historians say the last total solar eclipse in Zambia was seen in 1835, when the ethnic Ngonis, escaping from the Mfecane wars in South Africa, were about to cross the Zambezi river.

The Ngonis retreated, believing that the eclipse was a bad omen.

The government has mounted a massive awareness campaign through radio and newspaper advertisements as well as village meetings to tell rural populations what to expect.

"Nowadays, even though we have come to understand eclipses as just...natural phenomena, there are still people who regard them as signs of bad omen. Some would advise their children not to venture out to witness the event," said one official at the country's Eclipse Secretariat.

"There are those rural folk who believe that the solar eclipse has the capacity to resolve some of their most profound problems, there are those for whom the event will bring great fear. These are the issues we have to deal with," he added.

In a message to the cattle-rearing Lozi tribe of western Zambia, the Eclipse Secretariat said their animals would stretch their

(Continued on page 45)



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legs and start settling in for the night, as the crescent shrinks slowly and that they should not be concerned.

## OAU SUMMIT WILL KEEP FOCUS ON ZAMBIA

Information Minister Newstead Zimba said Zambia would be the best venue to view the eclipse because it was more peaceful and stable than its neighbours.

The annual Organisation of African Unity summit in Lusaka in July will keep the global focus on Zambia, further enriching its tourist potential and earnings for 2001.

As a foreign exchange earner, tourism still lags far behind copper and cobalt mining, and manufacturing, but analysts say the sector could easily become a major influence in the economy if marketing was improved and infrastructure repaired.

Some of the largest elephant herds in Africa can be found in Zambia's Luangwa Valley. A share of the Victoria Falls, usually marketed only as a Zimbabwean attraction, and a full-year calendar of cultural events could help tap more visitors if well presented in visitor brochures, tourist officials say.

Hotels and lodges on the full eclipse path -- from the northwestern town of Chavuma on the Angolan border through Zambezi, Kafue National Park, Lusaka and Chirundu -- are fully booked between June 20 and 22 and Seenka admitted that the country did not have the accommodation capacity to match demand.

Eclipse T-shirts and caps, special welders' goggles and sunglasses are already on sale, three months before the event.

22:05 04-08-01

From: Mike Murphy <evmurph@zetnet.co.uk>

A useful link for those watching the situation in the eclipse area is:

<http://news6.thdo.bbc.co.uk/low/english/world/africa/default.stm>

which is the BBC's news page about Africa. Yesterday, there was an interesting article about how Zim are missing out on the tourist opportunity that the eclipse presents. - Mike

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de> To: Finsternisliste <solareclipses@aula.com> Sent: Friday, April 27, 2001 7:00 PM Subject: [SE]

### Naming the child

Hello, it's not uncommon to give eclipses names, as far as I know. There was "The Big One", I think the TSE99 is sometimes called the "Big European" (why not the "Cloudy One"?), and last year North America saw the "Christmas Eclipse". Is there already a name for the upcoming event? "African Solstice" or something? Just curious.. Best regards, Marc

From: Kidinvs@aol.com To: SOLARECLIPSES@aula.com Sent: Friday, April 27, 2001 7:31 PM Subject: Re: [SE] Naming the child

I have given this eclipse a name that I believe has been accepted worldwide. It is called the "Rick Brown Eclipse". Rick Brown

From: Daniel Fischer <dfischer@astro.uni-bonn.de>

Well, all through the nineties people (esp. in Latin America) were calling total eclipses coming through their countries "the last eclipse of the century" or "the last eclipse of the millennium", even though that was only valid for their borders ... For the 2001 event I foresee various headlines like "Black Sun over the Black Continent" - just as could be seen after the 1980 eclipse. Daniel

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From: Evan Zucker  
<ez@MrTotality.com>

I get the feeling that every eclipse in that saros (1955, 1973, 1991, 2009, 2027, 2045) is named The Big One. Eighteen years seems to be long enough for memory of the last one to fade. Evan H. Zucker San Diego, California

From: Peter Tiedt <rigel@stars.co.za>

My website is named "Africlipse" I like that ..... Peter Tiedt

From: Olivier "Klipsi" Staiger  
<olivier.staiger@span.ch>  
hakuna coronata

From: Madden.G <iluvex@netacc.net>

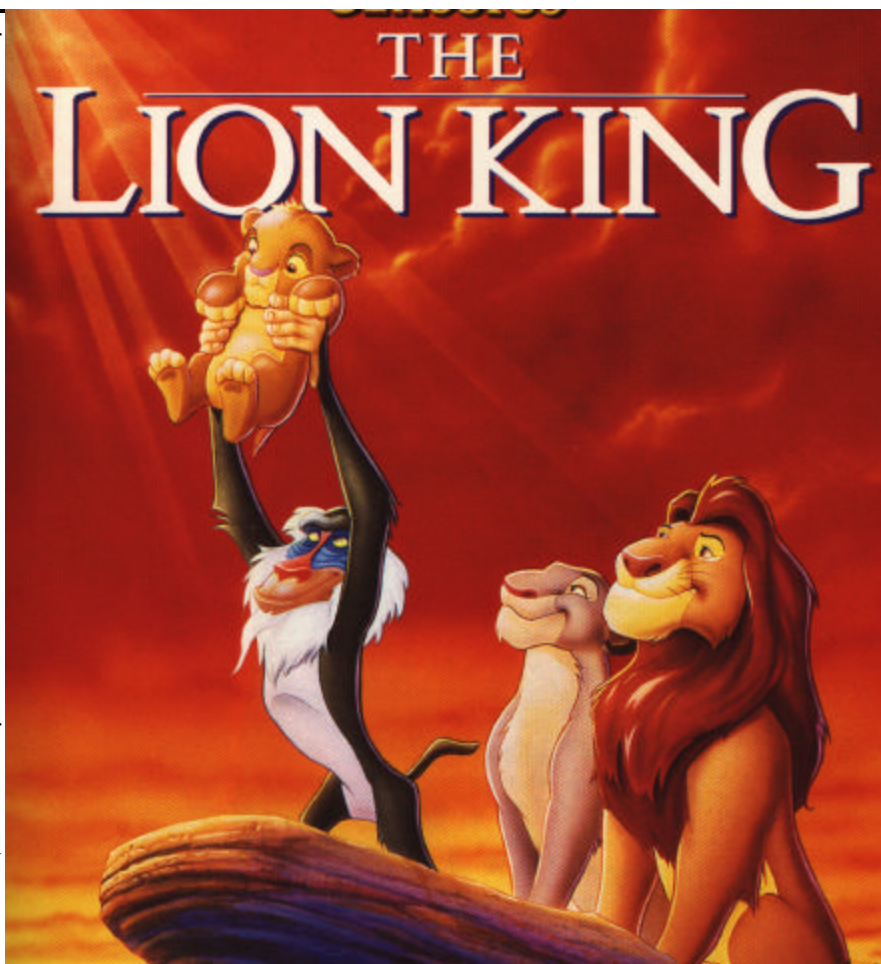
Third Millennium Eclipse? madden

From: Evan Zucker  
<ez@MrTotality.com>

Then shouldn't we call this eclipse "The First (Total Solar) Eclipse of the Third Millennium"? That would be true worldwide except in countries that don't use the Christian calendar. Evan H. Zucker

From: Harvey Wasserman <onsite@gate.net>

I kind of like that --> Afri-clipse. Sorry, but it has a bit of a better ring to it than "Rick Brown Eclipse"! lol, Harvey



From: Cliff Turk <cliffturk@yebo.co.za>

Hi All, I'm not sure that it is really necessary to name eclipses at all, but if this IS done, then I think the "African Solstice" is the best suggestion so far and it certainly has my vote. Cliff

From: Mike Simmons <msimm@ucla.edu>

There was quite a bit of the "last eclipse of the millennium" stuff in Iran where they use the Persian calendar (not the Islamic calendar). They also use our calendar for many purposes, too, though. And I can only confirm that this was written in English since I can't read Farsi so it could have been just for us foreigners. Mike Simmons

From: Olivier "Klipsi" Staiger <olivier.staiger@span.ch>

in 1994 the total eclipse in Brazil was also called "o ultimo eclipse del millenio" (or something like that) the ultimate eclipse. It certainly was the last total eclipse of the millennium - in Brazil !

and in 1998 it was the last total eclipse of the millennium - for the Caribbean ! :-)

well, one day (far away, I hope) it will be the last total eclipse - for me! :-( Olivier "Klipsi" Staiger , Geneva Switzerland

From: Brian Garrett <mgy1912@home.com>

In the US, a recent trend is for large public events (especially sports championships) and landmarks to be named for corporate sponsors--for instance, San Francisco's Candlestick Park is now 3Com Park. I hope this trend has not spread to other countries, but if it is not checked, the 2017 eclipse may well be the Microsoft-AOL Time Warner Eclipse, or whatever the predominant

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oligopoly might be at that time. I'm sure that plans are already under discussion to beam the AT&T logo across the entire lunar disk during totality :-) Brian

From: B0802Alex@aol.com

Hi all, my opinion is to wait for the right name until the eclipse is gone. After all the many impressions we will catch on our tour trough the black continent, will give the right name to the child.

In such cases, I remember the words a manager told to me: Yesterday's the past, gone, dead. You can't change anything about it. Tomorrow's still not born, so we can't say, what will come. But we're living now and should have fun and feel free today to manage the future. Best regards, Alexander

From: <Dorjenyma@aol.com>

The child's name is Jupiter. He will born suddenly when fathersun and mothermoon will make love during the solstice. The event could be called "the unique one" Or maybe anybody can tell to us it won't be unique in the history. Does a TSE stills occured at the solstice with Jupiter (or any othe planet) so close to the eclipse ? And what's in the future ? Thanks, Dorje

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

> hakuna coronata

This sounds interesting, but I don't understand it... Can you explain it to me, please? Best regards, Marc

From: Kidinvs@aol.com

In Swahili ..(pardon the spelling), the national language of Kenya, Hakuta Matata is "No problem"

From: <Jay.M.Pasachoff@williams.edu>

Though the translation of the Swahili is correct, the main point in the irreverent suggestion of "Hakuna Matata" as the name is that it is a hit song from the Disney movie "The Lion King." Ever since the suggestion was made, I can't get the melody out of my head. Jay Pasachoff

From: Henk Bril <h.j.bril@hccnet.nl>

Zam Sun Night ? Henk Bril

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hi there, Then "Hakuta coronata" means "No corona"!?!?!

Or is the correct translation "No problems seeing the corona"? Hoping for the second translation Marc

From: Olivier "Klipsi" Staiger <olivier.staiger@span.ch>

well, in Disney's movie "the Lion King" two of the animals sing a song named Hakuna Matata (no problem, in swahili ???) . So I combine the words "hakuna matata" and "corona" to "hakuna coronata" .

this could become a favourite title of this eclipse, as many people (kids, mostly) know the Hakuna Matata song (from The Lion King movie). Do a survey: ask 10 kids what kakuna matata means, where it comes from, if they have ever heard it , etc. . And also, many people know that "corona" is associated somehow with the Sun.

so, this is to emphasize that a) there will be no problem for us observing the eclipse (cross your fingers), and b) there is no danger - no problem, hakuna matata, to watch the eclipse, if you use precautions (eye-protection for the partial phases - or projection, ... and mosquito repellent for totality !)

the hakuna matata attitude is a joyous, happy , dancing, smiling attitude, comparable to the song "don't worry, be happy". I invite you to rent the Lion King video and watch it, and specially listen to that song, hakuna matata.

yeah, hakuna coronata. the more we discuss it, the more I love it ! :-) Olivier "Klipsi" Staiger , Geneva Switzerland

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From: Katherine LOW <katherine.low@worldonline.be>

Sorry to spoil the mood, but 'hakuna coronata' would mean something like 'There is no corona', providing coronata would be the swahili word for corona. I used to study swahili in evening school (more than 10 years ago). Hakuna means 'there isn't' like the french expression 'il n'y a pas'. An answer you may get sometimes in shops in swahili speaking countries (Kenya, Tanzania). The opposite would be 'kuna', there is. And 'Matata' is the plural for 'problem'. I suppose you would prefer: 'Hakuna mawingu' : there are no clouds.

My own preference: The Afroclipse (instead of the africlipse).

From: Madden.G <iluvex@netacc.net>

So, with that issue finally resolved, I'm back to: "Great Eclipse of the Third Millennium" [GETM] Hakuna mawingu! madden/rochester

From: Dale Ireland <direland@drdale.com>

"Eclipse Of the Century" would work it has been used for the last 4 or 5 eclipses with great success and for once it would be correct since it will be the greatest eclipse so far this century

From: Olivier "Klipsi" Staiger <olivier.staiger@span.ch>

> Sorry to spoil the mood, but 'hakuna coronata' would mean something like 'There is no corona',

oops. well can I have a Bud instead ?? :-) well, then what is the swahili word for sun ? sonata ? hakuna sonata ? no sun ? (hakuna coronata , no corona, could also mean: "... I did not see the corona because I kept the eclipse shades during totality ... " :-(

> providing coronata would be the swahili word for corona.

can you find out, please ?

>I used to study swahili in evening school (more than 10 years ago).

wow ! cool ! Teach us ! Can you please give us the swahili words for Moon, Sun, Eclipse, total eclipse, corona, diamond ring, streamers,(solar) prominence, first contact, sky, dark sky, star, stars, planet, planets, eclipse chaser, I am an eclipse chaser ?

oh, by the way, we speak discuss swahili, but is that the language spoken in Zam and Zim, too ? what is the official main language in Lusaka, english not included ? and what do you call Moon, sun, eclipse, etc. in that language ?

> Hakuna means 'there isn't' like the french expression 'il n'y a pas'.

also in french named "aucun" , sounding familiar with hakuna. Aucun means none, no one.

> I suppose you would prefer: 'Hakuna mawingu' : there are no clouds.

yes, but we can't 100% bet on that., sadly :-(

> My own preference: The Afroclipse (instead of the africlipse).

sounds good in english, but not in french. In french afro sounds also very similar to "affreux", which means "terrible, awful, very bad". Afro eclipse = Very bad eclipse ? Very bad... Well, instead of the Afro eclipse, we could name it the... The Aphro Eclipse ! I mean, seeing totality has near-aphrodisiac (?) effects on those who see it. Aren't we screaming, trembling, shivering, losing control ? Isn't there a climax ? :-) .... ( the aphro eclipse...??? Klipsi, get outa here !)



# A F R I C A 2 0 0 1

From: Henrik Glintborg <Henrik@tycho.dk> To: <solareclipses@aula.com> Sent: Tuesday, April 24, 2001 1:05 PM Subject: [SE]

## Pre-eclipse visit to Zimbabwe

I will go to Zimbabwe this friday to make the final preparings for my eclipse group from Denmark. My trip is totally sold out, so I will have the pleasure of bringing 80 people to watch the eclipse from Mavuradonha in northern Zimbabwe. It is a camp organised by "UtC" and I would like to ask if any of you are going there also? I will have a meeting with the danish embassy in Harare on monday to get different informations among others the situation in the country. I will also go to the place where the eclipse camp will be and make some GPS-measurements to get the exact coordinates. Do not hesitate to contact me if you would like me to get some informations in Zimbabwe. Sincerely, Henrik Glintborg Tycho Brahe Planetarium Copenhagen/Denmark

From: Madden.G <iluvex@netacc.net>

Henrik raises a good topic here. I would like to know where everyone plans to be. If you care to reveal that, send me a note off line at iluvex@netacc.net and I will compile a list. Please include dates. If you have a rough idea of the latitude and longitude that would be nice.

Such a listing might facilitate list members getting together for meetings and introductions. But hurry! Not long to wait now . . . George Madden Rochester New York

From: Nello Soldà <n.solda@eclipse2001.it> To: <SOLARECLIPSES@AULA.COM> Sent: Friday, April 20, 2001 6:27 PM Subject: [SE]

## travel to see the eclipse

Hi everybody, it's an interesting trip to see the next eclipse and to know a fantastic continent. You'll leave from Frankfurt on 19 June to Joannesburg. So two days in Joannesburg and Pretoria, then on 21 June you'll go to Lusaka to see the eclipse with a charter and in the evening you'll come back to Joannesburg. Then two days in the Kruger National Park, the biggest one of South Africa. The last two days in Cape Town. So you'll come back to Frankfurt on 26 of June. Further information on <http://www.eclipse2001.it/> or you can contact us at [info@eclipse2001.it](mailto:info@eclipse2001.it)

Best regards E c l i p s e 2 0 0 1 The First Total Solar Eclipse of the Third Millennium [www.eclipse2001.it](http://www.eclipse2001.it) - [wap.eclipse2001.it](mailto:wap.eclipse2001.it)



From: Olivier Staiger <olivier.staiger@span.ch> To: <SOLARECLIPSES@AULA.COM> Sent: Tuesday, April 17, 2001 9:01 PM Subject: [SE]

## Great satellite image showing Moonshadow

dear friends, check out [www.sat.dundee.ac.uk/pdus/AV/](http://www.sat.dundee.ac.uk/pdus/AV/) (visible) and [www.sat.dundee.ac.uk/pdus/AI/](http://www.sat.dundee.ac.uk/pdus/AI/) (infrared) there you can find excellent high resolution images from Meteosat. It is updated every 6 hours, at 06:00 UT, 12:00 UT, 18:00 UT and 00:00 UT. So, on June 21: the 06:00 UT image will show the sky / clouds shortly before the eclipse starts. But no moonshadow yet. However, the 12:00 UT image will be interesting: it will be taken just 3 minutes before maximum eclipse, when the shadow is in the Atlantic, near St. Helena Island. Thus we should be able to see a wonderful dark spot in the middle of the 12:00 UT image. And: it will be interesting to see the IR (infrared) image, too, which should reflect the cool air in the shadow. 2 months to go.... Klipsi

From: Olivier Staiger <olivier.staiger@span.ch>

and here [www.sat.dundee.ac.uk/pdus/XV/](http://www.sat.dundee.ac.uk/pdus/XV/) is another view from another satellite, centered over the Indian Ocean. There we should be able to see the terminator arrive near Madagascar, with a dark patch again, the Moon shadow over Zambia - Zimbabwe - Mozambique - Madagascar. Klipsi

From: Dale Ireland <direland@drdale.com>

You can get your own images, 12-15 times per day from low orbiting NOAA and Russian weather satellites. The equipment required is small, cheap, easy to set up, all battery powered. All you need is a laptop, a small radio called an ICOM pcr1000 (which is just a SW and scanner and is great fun besides doing weather sat) which plugs into the laptop serial port

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and is completely computer controlled and about the size of a small paperback book, and a small antenna about 2ft tall and 6 inches wide. The software to do this is free. Images I make with this set up can be seen at <http://www.drdale.com/cam> Resolution is about 3-4 km. The page above also has links showing all the equipment except the laptop. This setup would be great if your location is remote and you want watch the weather in the hours prior to eclipse. Dale

From: Harvey Wasserman <[onsite@gate.net](mailto:onsite@gate.net)>  
<http://www.sat.dundee.ac.uk/pdus/AI/latest.jpg>

This is the latest IR sat photo of the Eastern hemishpere. Scroll down and to the Right until you find the Cape.

Come up from the Cape along the East coast a couple of bumps until you get a bit past the finger of high clouds pointing to the East. Now look due North and you will see the Zambezi River flowing into the Indian Ocean. Follow it inland and then South and you go through Mana Pools and come to Lake Karibe. Go North and West and you come to another lake that is just SW of Lusaka.

I have never seen such detail in a weather photo, esp. IR. You can see the Zambezi escarpment. Let's hope its so clear in 2 months - 1 week! Harvey

From: Olivier "Klipsi" Staiger <[olivier.staiger@span.ch](mailto:olivier.staiger@span.ch)>  
3 subjects in one mail !

> <http://www.sat.dundee.ac.uk/pdus/AI/latest.jpg> I have never seen such detail in a weather photo, esp. IR.

the VIS ( visible ) has even better views. try it. <http://www.sat.dundee.ac.uk/pdus/AV/>

images are updates every 6 hours. on June 21 the 12:00 UT pix will be almost precisely at maximum eclipse ( it occurs 3 minutes later) We will see the shadow off the coast of Angola . For the images of the Moon's shadow near sunrise or sunset, go to other sats on same server:

morning (see the shadow bulge along the terminator as sunrise eclipse occurs off the coast of Brazil !) [www.sat.dundee.ac.uk/pdus/EV](http://www.sat.dundee.ac.uk/pdus/EV)

evening (shadow bulge along terminator with totality over Madagascar) [www.sat.dundee.ac.uk/pdus/XV](http://www.sat.dundee.ac.uk/pdus/XV)

these links can be found directly from my page <http://eclipse.span.ch/2001tse.htm> . Speaking of that page: I have added the titel Hakuna Coronata, and a cute animation where I, Klipsi, appear in the totally eclipsed sun for a second :-). Yes, I was inspired by Disney's Lion King , the famous song Hakuna Matata. It is a "don't worry - be happy" spirit song. No problem. Now, Maybe , Hakuna Coronata would be translated "no corona " ?? or "no problem seeing the corona" ? Should I say " Hakuna corona matata", or "Corona hakuna matata" ?

who cares ! I like Hakuna coronata. I'll stick to it :-)

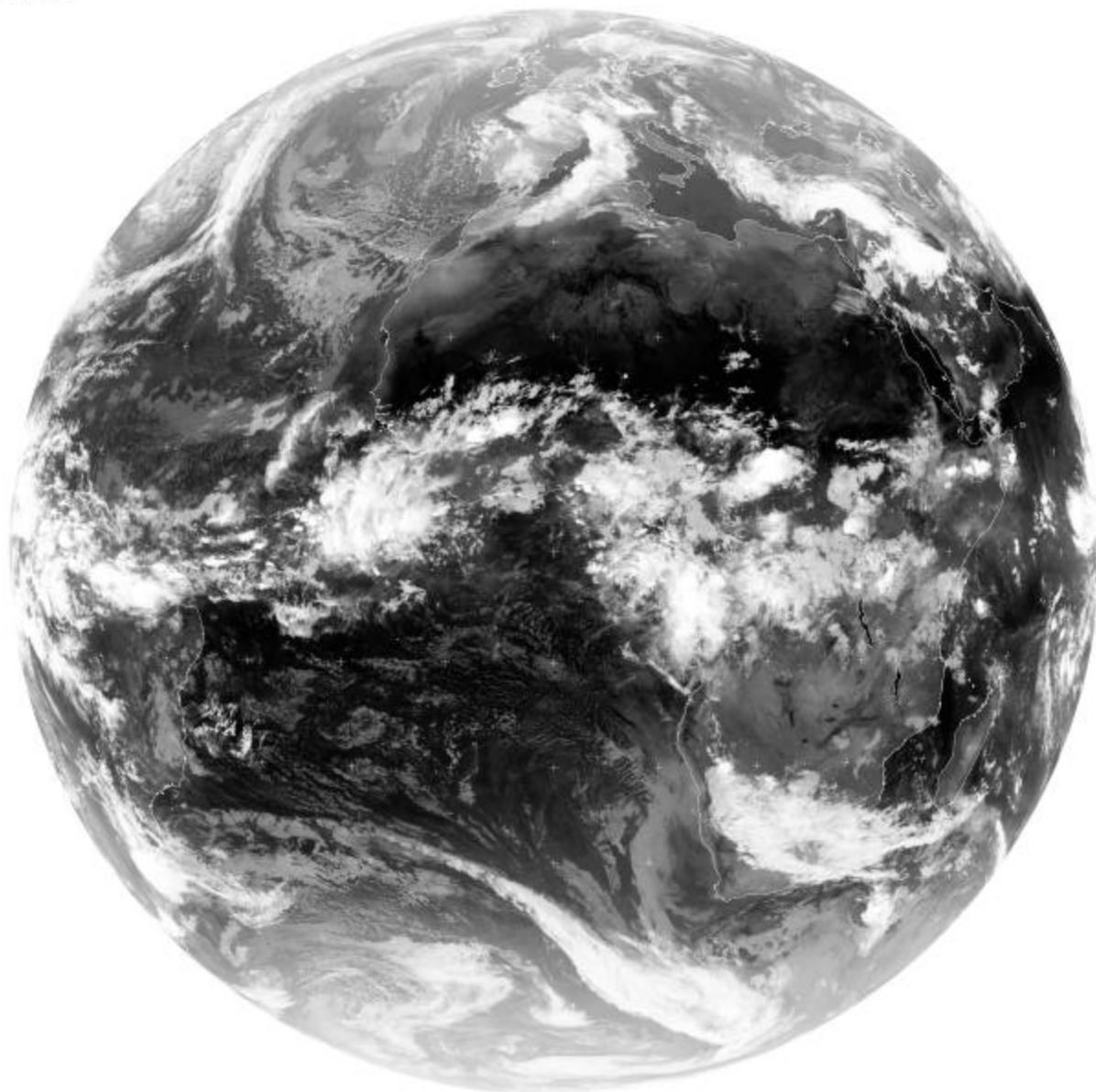
third subject: have you seen the extreme zooms from space which they show at [www.gsfc.nasa.gov/gsf/earth/imaging/landsat.htm](http://www.gsfc.nasa.gov/gsf/earth/imaging/landsat.htm) ? Absolutely amazing !!! Check out the zoom on the White House. now, wouldn't it be great to ask these guys to do the same for Lusaka ? I mean, Lusaka IS going to be the world eclipse capital. No other major city lies within the path of totality. So I invite all of you to write to these guys and ask that they do a magic space zoom on Lusaka (e.g. to my hotel, the Intercontinental. Or the University of Zambia campus.) And Fred, since you work at same place, could you endorse this demand ? If they post such a magic space zoom on Lusaka on their website it will give them lots of visits to their site, great publicity, in less than 2 months.

That's all for now. Tomorrow I fly to Houston TX, go chase storms and tornadoes for 3 weeks. Live daily pix and report at <http://eclipse.span.ch/tornadoalley.htm> . Will visit several friends who are both eclipse chasers AND storm chasers, in Kansas and Oklahoma.

Oh, by the way, I have added a new page , <http://eclipse.span.ch/210601starsgeminijupiter.htm> . Info and gif files about the faint stars around the eclipsed sun at totality in Lusaka, about Sun and Moon entering Gemini territory (funny, the couple meets the twins ) , and about the Jupiter - Sun conjunction occuring one week before the eclipse . have a great day. Olivier "Klipsi" Staiger , Geneva Switzerland



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From: Glenn Schneider <gschneider@mac.com> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, April 18, 2001 5:37 PM Subject: [SE]

**UMBGRAPHILE Update (Version 2.3.1)**

For the UMBGRAPHILE user's on this list, I have just provided an update - to version 2.3.1 - on my web site. To download (and see the release notes, etc), go to the just updated web site:

<http://balder.prohosting.com/stouch/UMBGRAPHILE.html>

Cheers, Glenn Schneider> gschneider@mac.com (now, counting the minutes until 21 June)

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From: Michael Gill  
<eclipsechaser@yahoo.com> To: Patrick Poitevin  
<Patrick\_Poitevin@Hotmail.Com> Cc:  
<brian.fraser@macsteel.co.za> Sent:  
Wednesday, April 04, 2001 3:53 PM  
Subject: Fw:

### Solar Eclipse trip June 21st

Patrick (cc: Brian Fraser), Forwarded from the AAVSO mailing list... Maybe you could post on the eclipse list if appropriate?

A solar eclipse could be considered as the closest star to us varying by about 26 mags!! Anyone interested in seeing this variation is welcome to join us.

The Johannesburg center of the Astronomical Society of Southern Africa are organising a flight from Johannesburg to Lusaka in Zambia to observe the solar eclipse of June 21st 2001. The flight will return the same day. There are still about 10 seats available. Cost is R2400-00 (about 310 USD). Anyone interested can contact Brian Fraser on brian.fraser@macsteel.co.za

From: <timo.karhula@se.abb.com> To:  
<SOLARECLIPSES@AULA.COM> Cc: <info@outbackafrica.de> Sent: Thursday, April 19, 2001 8:08 AM Subject: [SE]

### Two seats left on Outback Africa Eclipse Safari

Dear Eclipse-list, I got an enquiry from Sandveld Tours / Outback Africa that there has become two empty seats on their tour. They write:

As we have had two cancellations recently, we now have two empty seats on this tour. There are two people interested that are presently looking for flights, and asked me to hold the seats until tomorrow. If they do not take the seats, would you know of any person or couple still interested in going on this tour and spontaneous enough to make a "last minute decision"?

So, if there are interested persons on this list which has not yet found an economic journey from South Africa / Namibia to Lusaka have still a chance. There will be one professional astronomer from USA participating. Most of our group will fly from Europe. For more information, please contact:

OUTBACK AFRICA Erlebnisreisen Am Wohld 30 a, D - 24109 Kiel, Germany Tel. +49-431-533 2626 Tel & Fax +49-431-525242 info@outbackafrica.de visit our website: www.outbackafrica.de or www.outbackafrica.com

or me timo.karhula@se.abb.com /Timo

From: Patrick Poitevin <patrick\_poitevin@hotmail.com> To: SE Mailing List <SOLARECLIPSES@AULA.COM> Sent: Tuesday, April 03, 2001 9:27 PM Subject: [SE] **Weather Project Africa 2001**

For those whom are new on the list (please do not reply if you received a personal mail from me in regard of this project):

Please join the Weather Project Africa 2001 which we carry out together with the University of Plymouth, England. The weather project is quite simple, though, due to the aimed consistency and accuracy of the data, we want some uniformity. They would like, if possible, the following measurements/data:

SHADED air temperature, between 1-2 metres above the ground in a reasonably exposed position, ground temperature, wind speed, visual observations of (changes in) cloud amount, level and type(s), all these observations at <=5- or 10-minute intervals during and maybe slightly around the whole eclipse period (partial as well as total)? Also, anything else you may think of (e.g. solar radiation, if they have appropriate instruments). Details of sites (site photographs?), co-ordinates, site exposure and instruments/methods used would also be very much appreciated.

Proposed instruments: The instruments they have chosen for me are by a company based near Cambridge and match up with their existing data logger. They are all lightweight (only a few kg together) and include an anemometer (for measuring wind speed), relative humidity and precision air temperature sensors both mounted in a solar radiation shield, a soil temperature probe, and a solar energy flux sensor. The data logger is also very portable (shoebox-sized). The instruments are to be rigged up a basic mount (e.g. tripod?).

The results of the Weather Project Africa 2001 will be presented by Dr. Edward Hanna, Lecturer in Meteorology at the Institute of Marine Studies, University of Plymouth, on 11 August 2001 at TOTALITY DAY 2001 in the Open University of Milton Keynes, England.

Any other ideas are more than welcome. Best regards, Patrick

From: Glenn Schneider <gschneider@mac.com> To: <SOLARECLIPSES@AULA.COM> Sent: Wednesday, April 04, 2001 3:02 AM Subject: Re: [SE]

### Obtaining Zambia/Zimbabwe visas for US citizens...vaccination info...

Hi John, Would you be so kind as to forward me a copy of the Visa form. A Word attachment is fine. Thanks!

From: Kidinvs@aol.com

I called the Zambia Embassy today, and was told that US passport holders can get a visa at the Lusaka airport upon arrival. You may also get a visa at the border at Victoria Falls. Arriving US passengers to Lusaka will not need any Medical certificate, nor will you need one arriving from Zimbabwe if you have arrived within the last 5 days, and have not visited any other African country since your arrival to Zimbabwe. The contact I spoke to was Emmem. This is consistent information that I have received in the past when calling the Embassy.

From: Madden.G <iluvex@netacc.net>

I confess I'm puzzled. I was told that the Zimbabwe visa could be obtained on entry into the country. Is this incorrect information? Must we hold them before we leave the U.S.?

Also, what vaccinations are people 1) definitely and 2) likely going to get? madden/rochester

From: Stephen Russell <smr@cse.unsw.edu.au>

You should get Yellow Fever. You should think about Hepatitis A and B, and typhoid. Check how current your diptheria, tetanus and polio vaccinations are.

Note that while Zambia itself might not require medical certificates to enter their country, you should check if any other country will require certificates to let you in afterwards. For example, I understand that South Africa does require evidence of yellow fever vaccination, even if you are only transiting through Jo'burg airport on your way home. (I also can't get back into Australia without the certificate; well, I could choose to be quarantined, but I'd rather not. :-)

I'm not an MD, of course. Check with a travel medicine doctor for real advice.  
Cheers, Steve.

From: Joel M. Moskowitz, M.D. <moskowi@attglobal.net>

> You should think about Hepatitis A and B, and typhoid.

Typhoid is a series of pills.

It's a little late for Hep A and B for full immunity, as they are a series of 2 and 3 shots, respectively. However, you should at least get the initial (you could do 1 Hep A and 2 Hep B). This might give you enough immunity for the near future.

> Check how current your diptheria, tetanus and polio vaccinations are.

Update your DT if you haven't had in less than 10 years. If you only had the Sabin (oral) polio, or if it has been a long time (like when you were a kid), get polio (Salk only these days).

Yellow fever is a good idea.

In addition, don't forget to start your Lariam (anti-malarial) 2 weeks before you leave, and continue for 1 month after you get back.

Also, some insect repellent would be a good idea.

If you are allergic to bee stings, bring an epi-pen (actually bring at least 2, you will be far from decent medical care). Joel M. Moskowitz, M.D. 7 (total) eclipses and counting

From: Henk Bril <h.j.bril@hccnet.nl>



(Continued on page 54)

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Hello; As far as I am informed Yellow Fever is obligatory for Zambia. Henk Bril

From: Brian Garrett <mgy1912@home.com>

Before opting for Lariam as their antimalarial of choice, take a look at <http://lariaminfo.homestead.com> and some of the links there, and consider that there are other effective medications out there which are far less risky. No, I don't own stock in a competing pharmaceutical company, and I don't want people to be scared for no reason, but I am very much a proponent of people being responsible for their own health care. Read, and judge for yourself. Brian

PS Our esteemed host has advised us against off-topic messages recently. I submit that, with the eclipse less than three months away, those traveling to the zone of totality must make their preparations now, and that any message directly concerning those preparations is very much on-topic.

From: Assoc Prof J R Huddle <huddle@usna.edu>

To get info on vaccinations, try the U.S. Centers for Disease Control and Prevention (still called "The CDC") at [www.cdc.gov](http://www.cdc.gov). Over on the left-hand side of this page, click on "Travelers' Health". NOTE: There are lots of countries all over the globe that do not require you to get any immunizations in order to enter, but you should get some anyway. (In fact, I think this is true of ALL countries.) The CDC site tells you what the CDC recommends, not what the country requires. Usually (but I can't guarantee it to be true all the time) if you get what CDC recommends, you will have more than enough to get past immigration control. There are physicians who specialize in travel medicine; many of these (but not all of them) will check the CDC site and follow the guidelines they read there, and then they will charge you half again as much as your own sawbones, who will do exactly the same thing.

To find the address and phone number of an embassy in the USA, try [www.embassy.org](http://www.embassy.org). In the UK, try [www2.tagish.co.uk/Links/embassy1b.nsf/](http://www2.tagish.co.uk/Links/embassy1b.nsf/). Sorry; I didn't find any similar pages for embassies in other countries.

Last time this thread was active, I used [www.embassy.org](http://www.embassy.org) and called both the Zimbabwean and Zambian embassies in Washington, DC. Both said that Americans can get visas at the point of entry. I did not ask about citizens of other countries. I did not send e-mail about this at that time, because several other people said basically the same thing. But one thing I learned about ZAMBIA that did not get mentioned is the following: If you go to the Zambian Embassy in Washington, DC, to get a visa before you leave America, they will sell you a MULTIPLE ENTRY visa, whereas if you wait until you arrive at Lusaka International Airport, you can get a SINGLE ENTRY visa, which costs a few bux less. The Embassy of Zimbabwe in DC will sell you the same visa at the same price as the dudes in Harare - but "if my memory serves me correctly" (to quote the Iron Chef), the price I paid at the airport in Harare last March, and last June, was a little bit less than the price the embassy dude quoted me a few weeks ago.

Am I the ONLY guy who is making a side trip to Botswana either before or after the eclipse? Seems a shame to go all the way to southern Africa and not see Vic Falls or the Okavango Delta.... Well, I also called their embassy (again, I got the number from [www.embassy.org](http://www.embassy.org)) and they said Americans do not need any visa, just a passport, and no shots are required to get past immigration control, you should probably get some anyway; check the CDC web site. Best Regards, Jim Huddle

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Dear Jim, dear list members, Here! Our group is going to visit the Okavango Delta and Vic falls before the eclipse. Once I'm going all the way down there, why shouldn't I take a look at the country? Heavens, our departure is just two months away! Best regards Marc

From: B Yen <byen00@earthlink.net>

I caught an interesting National Geographic show recently (NGC channel). An American pilot flew a single-seater to Okavango, "buzzed the Victoria Falls" (risky), then flew on to Kafue Park (Zambia).

It gave me a reconnaissance of the geography of that part of Africa, the people, etc. Kafue Park (northern section, where the eclipse path is) was swampy grassland (!)..this was sometime in May, early June. I thought it was dry up there at that time ?

He was observing a watering hole, & the elephant charged him! I saw a profile of Peter Beard (photographer in Africa) on the Bravo channel, who got too close to some elephants. The mother elephant charged him, & stomped him! All caught on video. He's lying there with broken bones (pelvis) & says "Getting stepped on by an elephant...is INCONVENIENT". It took several hrs to get to a major hospital, almost died. <http://www2.varsity.utoronto.ca/groups/varsity/archives/119/oct11/review/call.html>

(Continued on page 55)

# A F R I C A 2 0 0 1

On another program, I saw a NGC program about Survival-of-the-Fittest in Kruger National Park in S. Africa. Leopard mother & 2 siblings. Leopard catches antelope, gets stolen by hyenas. Leopard catches antelope, takes prey up in trees.. marauding lions climb up tree (!), steal antelope. "timid sibling" gets killed by lions. Mother chases off other sibling (after maturity), sibling tackles a wild boar & gets slashed.

I guess I won't be openly "challenging" the wildlife in Zambia! (I'm glad I saw the above 2 shows, probably saved me from injury or worse)

I'd like to hear any input of people going to northern Kafue Park: their eclipse land-travel plans, expected terrain, etc. I saw a website where a NASA/JPL expedition went to S. Africa in 4x4s. Their tents were setup on the \*roof\* of the 4x4 (security from wildlife, like lions). Is that what safari-4x4s going to northern Kafue are doing? (note: there are camps in northern Kafue, which have secure "housing").

To Peter Tiedt: What do you think about setting up a telescope + mount, to do nighttime astrophotography on the Busanga Plains? (I might be setup near a science expedition, who will be at some camp in the Busanga Plains). Since it is out in middle of nowhere, & there is a lot of nighttime wildlife activity (hunting by leopards & lions)...this may sound inadvisable. Is the ONLY place to set up a telescope safely, in the secure camps?

From: Peter Tiedt <rigel@stars.co.za>

I have asked a leading travel agent in the area to get me specific data on shots required for Zambia and Zimbabwe. Will pass it on as soon as received.

Other worthwhile side trips are to: Kruger Park (SA) also as a recce for 2002. Hwange Nat Park (Zim) Eastern Highlands (Zim) Cape Town Etosha Game Reserve (Namibia) Skeleton Coast Nat. park (Namibia)

> He was observing a watering hole, & the elephant charged him! I saw a profile

Don't get over-perturbed about these incidents - they are ALWAYS overdramatised.

99.9% of sensible visitors have a wonderful experience.

> On another program, I saw a NGC program about Survival-of-the-Fittest in Kruger National Park in S. Africa. Leopard mother & 2 siblings. Leopard catches antelope, gets stolen by hyenas. Leopard catches antelope, takes prey up in trees..marauding lions climb up tree (!), steal antelope. "timid sibling" gets killed by lions. Mother chases off other sibling (after maturity), sibling tackles a wild boar & gets slashed.

These incidents, while not terribly rare, are extremely rare on film - and therefore get maximum airtime. I was once witness to a cheetah taking an impala and having the prey stolen by a crocodile - was awesome to watch, but happened over 300m away, so no footage.

> I'd like to hear any input of people going to northern Kafue Park: their eclipse land-travel plans, expected terrain, etc. I saw a website where a NASA/JPL expedition went to S. Africa in 4x4s. Their tents were setup on the \*roof\* of the 4x4 (security from wildlife, like lions). Is that what safari-4x4s going to northern Kafue are doing? (note: there are camps in northern Kafue, which have secure "housing").

Roof tenting is just a form of convenience - but is also safer. Most professional camps are secure and have ground accommodation.

Roof tenting has big advantages - let the air mattress down, fold the tent and drive. Arrive in camp, open tent, connect the pump to the mattress, sleep

Peter Tiedt rigel@stars.co.za Visit my website at <http://www.eclipse.za.net>

From: Peter Tiedt <rigel@stars.co.za>

Hi all, Attached is from a travel clinic here in SA.

(Continued on page 56)



# A F R I C A 2 0 0 1

It may be of use to those travelling to Africa.

Please find details of inoculations:

Routine:

Diphtheria/Tetanus: this combined vaccine is needed every 10 years, provided you had a course of three as a child

Polio: this is an oral vaccine which you need every 10 years

Recommended:

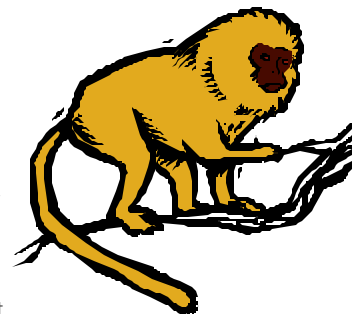
Hepatitis A: if you are going to a developing country, or are a frequent traveler, get

Hepatitis A, repeat the dose after 6-12 months and get 20 years protection

Required:

Yellow Fever: this vaccine is officially required when entering certain countries, or if you have come from an infected zone (in the last 6 days). This vaccine lasts 10 years. You need to have it at least 10 days before departure.

I also recommend you take malaria tablets.



From: <Jay.M.Pasachoff@williams.edu>

The question of whether yellow fever inoculation is necessary for Zambia has not yet been resolved in this newsgroup. I wrote the Economic Officer at the US Embassy in Lusaka, whom I met on my trip there two weeks ago, and here is his reply:

"It is not necessary and many people even consider it dangerous. In fact, the first time I traveled to Asia, 10 years ago, my doctor stamped in my immunization card that I had it when, in fact, I didn't. He didn't want to administer it and he didn't want anyone else to either."

Talk to your doctor about it, but most people do not get it."

I think people still have to talk to their doctors and to decide whether areas they go to have yellow fever mosquitos. I know that nobody inspected any inoculation list when I entered Zambia at Lusaka airport in mid-March. Jay Pasachoff

From: Kidinvs@aol.com

Finally.... I have been repeating this every month or two. And again, I called the NY Zambian Embassy, and was told that people arriving from the US and Europe, as well as Zimbabwe that do NOT have a passport with a stamp from an infected country within the past 10 days will NOT have to prove that they have had a shot for YellowFever. They men-

tioned that notices will probably be posted at the border crossings by eclipse time. Perhaps Jay has more credibility than I. Eric Brown

From: Peter Tiedt

Another thought has occurred .... You may not need to have the YF shot to get into Zambia. BUT ... What when you return home? Will you be allowed back without being shoved into quarantine?

From: <Jay.M.Pasachoff@williams.edu>

Well, I am writing from home in Massachusetts, so I was allowed back into the US after my trip last month to Zambia. I told the passport control officer that I had been in Zambia and England, and he said welcome back and stamped my passport.

Perhaps somebody can find out what active yellow fever outbreaks there may be at the moment. Things might be even better in June, which is the dry season. Jay Pasachoff

From: <Jay.M.Pasachoff@williams.edu>

I asked an expatriate government consultant in Zambia about the yellow fever inoculation and here is his reply. Obviously, I do not take responsibility for the advice and neither does he. I just report it for your own evaluations. Jay Pasachoff

Dear Jay, I spoke to a nurse at MinBank (Medical Clinic) and she told me that yellow fever vaccination is not required in Zambia, Zimbabwe and Botswana. J. Jacques B. Hillinger POSTNET # 14 Private Bag E 891 Lusaka, Zambia

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From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello, I'm sorry to contradict, but I simply don't understand this whole discussion. Why don't we all go and get that vaccination, whether this or that government requires it or not? Vaccinations are not meant to be bureaucratic requirements, they're meant to protect yourselves and others from fatal diseases! Please, try to take yellow fever a little serious. Last year a German (that's where I come from) died of it, an otherwise healthy young man. Some patients feel a bit ill for one or two days after the injection - so what? A plain cold can be worse, and many don't feel anything. I'm sure the risk you take by going to Africa unprotected is far worse. Best wishes Marc

From: John Leppert <johnleppert@peoplepc.com>

Friends, I'd like to say that I concur with Marc as well. I had a YF vaccination before going to the '94 eclipse in Bolivia and I had no reaction to the medication at all. That leaves me protected for this journey south as well. John Leppert Bismarck ND

From: Dale Ireland <direland@drdale.com>

CDC info on requirements

<http://www.cdc.gov/travel/yelfever.htm>

CDC info about the disease

<http://www.cdc.gov/travel/yfever.htm>

detailed paper about the disease, vaccine and recent outbreaks.

<http://www.who.int/vaccines-documents/DocsPDF/www9842.pdf>

I wouldn't get the vaccine unless it is required for travel. Outbreaks are rare and isolated, vaccine side effects are 5% and there is a long list of contraindications for the vaccine. Outbreaks occur only during the rainy season, there has not been a June outbreak for more than 20 years, probably longer. Dale

From: Sylvain Rivaud <lepithec@caramail.com>

I agree with Marc too. I just come back from the hospital for YF vaccination. It's only a little vaccination for 10 years !!

Here in France, YF vaccination is required : if you don't have the "International YF vaccination certificat", you can't obtain the "VISA" for the travel... Sylvain.

From: <Jay.M.Pasachoff@williams.edu>

I agree that I would have the yellow fever vaccination if I could get it. In my part of the US, it is hard to get. My local doctor has been unable to arrange to get the vaccine in my town. And there is an official certification form that gets filled out by some central agency. So it isn't as simple as getting a measles inoculation. Jay Pasachoff

From: Alyn Kelley <alyn@well.com>

Dale sez: I wouldn't get the vaccine unless it is required for travel.

After reading through the links you provide, I don't get that same message from the information. Zambia is listed as an 'endemic' country for Yellow Fever, and the CDC says the following:

"However, if your travel plans include traveling to or from a South American or African country that is infected with yellow fever or is located in areas where yellow fever transmission has occurred (endemic areas), then the easiest and safest thing to do is to get a yellow fever vaccination and a signed certificate."

since I am not an infant, am not allergic to eggs, and not immunocompromised, I see absolutely no reason why I should not get this vaccine.

however thank you very much for posting these links; they were very helpful in making my vaccine decision for the trip to Zambia. Alyn

From: Marc Weihrauch <marc.weihrauch@student.uni-halle.de>

Hello Dale, thank you for the links!

> I wouldn't get the vaccine unless it is required for travel. Outbreaks are rare and isolated, vaccine side effects are 5% and there

(Continued on page 58)

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is a long list of contraindications for the vaccine.

Oh well, the site you mentioned says not even one out of twenty gets a mild headache from the vaccine, and the list of contraindications consists of just a few standards: Allergic against eggs (that's where they breed the vaccine), pregnant women, babies, and people suffering from immune deficiency. That's it.

The contraindications will apply to very few of us, and even if outbreaks are unlikely: I still prefer risking a mild headache to being all unprotected. Catching a deadly fever might impair the experience of totality ;) Best regards Marc

From: Paul & Leni

Thought this would be of interest to the group. We just received this from our tour operator re: the infamous Yellow Fever vaccination. This would be a problem to those of you that are traveling between Zambia and South Africa (for example homeward bound flights out of Johannesburg, etc.).

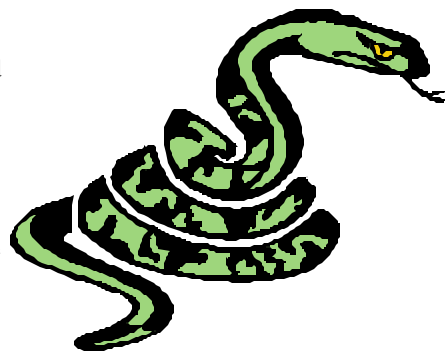
Dear Africa Eclipse Participants: The following is a VERY IMPORTANT message concerning our upcoming adventure to Africa. This came directly from our tour operator in South Africa. "The Director General at the Department of Foreign Affairs has advised that a person traveling from Zambia to South Africa will be required to produce a Yellow Fever vaccination certificate on arrival in South Africa. This directive has been issued on the advice of the International Health Regulations Act.

This matter is being taken up with the Zambian Ministry of Health but until such time that a new directive is issued by the Department of Foreign Affairs, we will be obliged to inform all of our customers traveling to Zambia who must enter South Africa afterwards that a Yellow Fever vaccination is compulsory."

You should immediately begin checking with your Doctor or County Health Department on the procedure for getting your mandatory Yellow Fever Certificate. You must bring the certificate with you when you travel to Africa. Regards to all, Paul Hirsch

From: Mel Bartels <mbartels@efn.org>

FWIIW, our travel agency has just sent the following note to us:



This came directly from our tour operator in South Africa. "The Director General at the Department of Foreign Affairs has advised that a person traveling from Zambia to South Africa will be required to produce a Yellow Fever vaccination certificate on arrival in South Africa. This directive has been issued on the advice of the International Health Regulations Act. This matter is being taken up with the Zambian Ministry of Health but until such time that a new directive is issued by the Department of Foreign Affairs, we will be obliged to inform all of our customers traveling to Zambia who must enter South Africa afterwards that a Yellow Fever vaccination is compulsory." Mel Bartels

From: Madden.G <iluvex@netacc.net>

Dear List, The following is primarily for Americans, however some of this information may be useful for others.

My wife and I engaged an epidemiologist at the University of Rochester (New York) Medical School on advice of my personal physician. This individual was quite well versed in health situations around the world as his organization deals daily with travelers with various destinations. Clients include Eastman Kodak (which is presently moving a significant number of families to China), Xerox Corporation, General Motors and so on. I developed a high degree of confidence in this persons knowledge and experience. Here is what came about:

1. He INSISTED that we get Yellow Fever vaccine.
2. He INSISTED that we get Hepatitis A vaccine.
3. He SUGGESTED that we get polio shot (I have not had a booster in 30 years).
4. He SUGGESTED that we get tetanus shot since neither my wife nor I had had boosters that we could recall.

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5. He SUGGESTED that we get influenza shot since the southern hemisphere is nearing the flu season.  
6. He STRONGLY SUGGESTED typhoid shot.

Finally, he prescribed anti-malarial medication which we will begin taking several days before our departure. We elected to follow this regime since -- in consultation with my personal physician -- I found his full concurrence.

Our travel company has recently notified us that they insist on evidence of Yellow Fever inoculation as well before they will issue travel credentials.

(I note that for a day or so after getting these inoculations that I felt a little ill as though I had a cold coming on, but that only lasted about 24 hours. My wife did not get this reaction at all).

I offer this for what value you may find in it and apologize in advance to the List and to Patrick for being slightly off topic or redundant. Clear skies! madden/rochester

From: Joel M. Moskowitz, M.D. <moskowi@attglobal.net>

You are missing Hepatitis B. There is still enough time to get the first 2 doses (1 month apart) before the trip. The third dose is 6 months after the second. Many people will get immunity after only 2 doses. Hepatitis B is more serious than Hepatitis A. Joel M. Moskowitz, M.D.

From: Evan Zucker <ez@MrTotality.com>

As a graduate of the University of Rochester College of Arts and Sciences, I can affirm that the University of Rochester School of Medical School is very highly regarded in the United States. It was ranked 14th in the U.S. for primary care by U.S. News & World Report -- <http://www.usnews.com/usnews/edu/beyond/gradrank/mdp/gdmdpt1.htm> Evan H. Zucker San Diego, California

From: Madden.G <iluvex@netacc.net>

Thanks for the promo Evan, I'll pass it along to the Board of Regents . . . :) You didn't mention our wonderful winters. Or is that why you are in San Diego?

I MUST MAKE ONE IMPORTANT AMENDMENT to my original post on the topic of vaccinations. As Joel Moskowitz correctly points out:

>> "You are missing Hepatitis B. There is still enough time to get the first 2 doses (1 month apart) before the trip. The third dose is 6 months after the second. Many people will get immunity after only 2 doses. Hepatitis B is more serious than Hepatitis A."

It is quite true that Hep B is more serious than Hep A. However, Hep B is transmitted via body fluids, blood or blood products. I should have mentioned that my wife already gets this vaccine as a result of her work so she is covered. I have elected to not get the shots since I intend to severely restrict my contact with the local population. Among most travelers, especially those with a planned short stay, the risk of contracting is higher for Hep A than Hep B. This is my decision. Others will have a differing view. I suggest that if you have any doubt, please follow Dr. Moskowitz's suggestion above -- and do it soon.

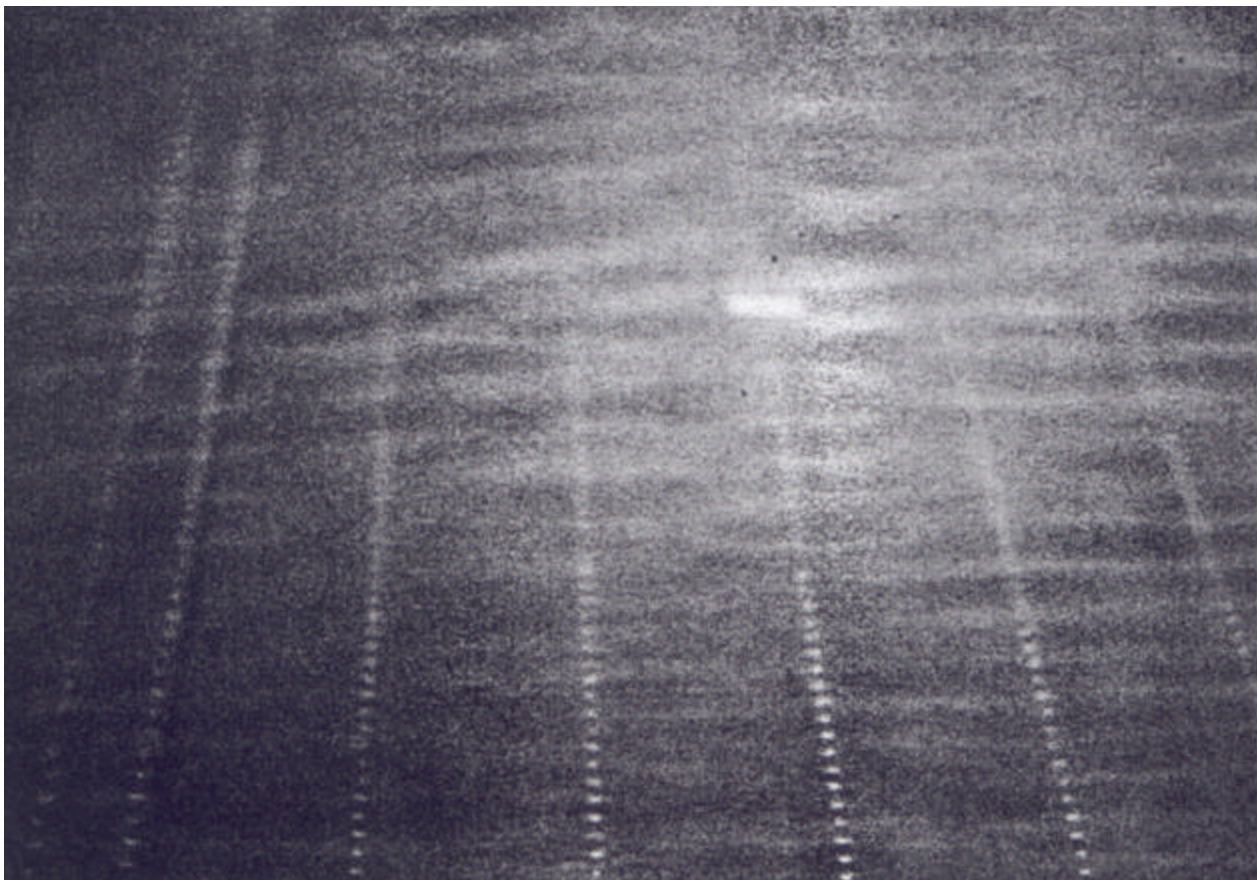
I might also mention that there are at least two anti-malarials: MEFLOQUINE and MALARONE. Which one you use may depend on the kinds of medications you may be taking. Check with your physician for drug interactions. madden/rochester

From: Joel M. Moskowitz, M.D. <moskowi@attglobal.net>

The distinction of catching Hep B by contact with body fluids only is not completely true. One can get Hep B by the "infectious" route and Hep A by the "fluids" route. The key here is that the immunizations needed for endemic diseases is for 2 routes of transmission: 1) insect-borne, and 2) communicated by poor sanitation. A third route is by animal contact (rabies, ebola), but I sincerely hope that no one has any animal contact, so for this discussion, I would limit it to the 2 categories. Insect borne diseases that we are concerned about are malaria and yellow fever. Poor sanitation includes typhoid, cholera, polio, Hep A AND Hep B. Please note that there is also Hep C, but there is no vaccine yet. Also note that there is also tetanus, that enters your body through a skin break in contact with the ground, so you need to make sure you are current with that. I am not an infectious disease specialist. I am an OB/GYN, but the above is accurate. Joel M. Moskowitz, M.D.

From: Barrie W. Jones <b.w.jones@open.ac.uk> To: SOLARECLIPSES <SOLARECLIPSES@AULA.COM> Sent: Saturday, April 21, 2001 12:38 PM Subject: [SE] Shadow bands - images needed

### SHADOW BANDS - IMAGES NEEDED



This is an appeal for images of shadow bands from this June's eclipse, in order to promote a significant advance in our understanding of this fascinating phenomenon.

I will not be travelling to the eclipse, but I would be most interested in receiving high quality images of shadow bands. I have studied these for a few years, and details of my papers can be found at <http://physics.open.ac.uk/research/astro/index.html>

My own measurements have been of the light fluctuations detected by an array of small photometers. The really urgent need is for high resolution images. From the detailed two-dimensional pattern, as opposed to a few point samples, a lot could be learned about the atmospheric scintillation theory that explains the phenomenon.

I have seen some interesting videos of shadow bands and a few interesting photographs. Unfortunately, these are not very useful for the sort of investigations that are needed because the patterns are blurred by the motion of the bands.

The requirements for un-blurred images are, unfortunately, rather severe. Here are some salient properties of the bands, when they are visible to the eye.

- 1 The ambient solar irradiance (whole spectrum) will be of order 1-10 watts per square metre.
- 2 The contrast of the bands will be of order 0.1-1% over the approximate waveband 0.4-1 micron, the larger contrast values being nearer to totality.
- 3 The bands will move at some average of the wind speed in the lower troposphere, typically a few metres per second.

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4 (a) Though the spacing of the bands is often estimated as about 10 cm this is a result of how our eyes respond to variations of various frequencies. In fact there are band structures with a huge range of size, and not only perpendicular to the bands but along them too.

(b) To advance the subject, an image must resolve structures as small as possible - a few millimetres would be very useful.

Here are some suggestions of how to record the bands.

1 Obtain a screen that is matt white and unwrinkled. Cardboard a few millimetres thick would be OK. It needs to be at least a metre square.

2 Put a scale along one side of the screen, and also the direction of true north.

3 Orientate the screen securely, either horizontally, or vertically, or perpendicular to the line to the Sun.

4 Ensure that there are \*no\* flickering artificial light sources nearby, such as from street lamps that automatically come on!

5 Arrange your camera so that the screen just fits within the field of view, and so that the optic axis is perpendicular to the screen.

6 Watch the screen from about three minutes before second contact up to when the second contact diamond ring appears, and again from just after the diamond ring at third contact to about three minutes later.

7 If shadow bands are seen then take as many images as you can get. Even if there seem to be none they might be there, either with too low contrast, or moving too fast. As you have gone to the trouble to set up, you might as well take some images.

8 Even though the band contrast might be better with a filter, I would not use a filter because of the need for as much light as possible.

Clearly the camera needs to operate with as fast a lens as possible and with as short an exposure as possible. Film needs to be as fast as possible, though CCDs are preferred because of their photometric linearity. In any case, please record full details of camera settings and of any film used.

You can gauge exposure times from the information given above and from the lens speed etc of your equipment. You might predict that you would only have a hope of recording the required detail if the wind speed were to be low, thus reducing motion blur. Well, you might be lucky - the wind speed might just be low. However, even if the wind speed were zero the bands would still not form a fixed pattern - the turbulence structure of the atmosphere that gives rise to the bands constantly changes. This has been seen at some eclipses, where the bands seem to 'boil' rather than race across the landscape. But low wind speed certainly helps.

If you do get images then please get in touch with me at the address below. In any consequent publication full credit or joint authorship would be guaranteed. Thanks, Barrie W Jones

Dr Barrie W Jones, Head, Department of Physics and Astronomy, The Open University, Milton Keynes, MK7 6AA, UK, tel +44 1908 653229 FAX +44 1908 654192



From: FRED ESPENAK <u32fe@lepvax.gsfc.nasa.gov> To: <SOLARECLIPSES@AULA.COM>; <eclipse@hydra.carleton.ca> Sent: Wednesday, April 25, 2001 4:36 PM Subject: [SE]

### TSE2001 Local Circumstances

A number of people have asked me if I could generate local circumstances eclipse predictions for various locations and observing sites which are not already included in the NASA 2001 eclipse bulletin (see: <http://umbra.nascom.nasa.gov/eclipse/010621/text/tables.html> ).

The easiest way for me to accommodate these requests is to ask each of you to send me a list of locations and coordinates in a format that my software can read directly. At the bottom of this message is a detailed description of the exact format that the coordinates must be formatted in.

To cut down on unnecessary messages, please be sure to submit your list of places & coordinates directly to me (espenak@gsfc.nasa.gov) rather than to the entire mailing list. When I've had a chance to generate the predictions, I will post them on the web on my TSE2001 web page (<http://sunearth.gsfc.nasa.gov/eclipse/TSE2001/TSE2001.html>). Thanks, Fred Espenak

From: Crocker, Tony (FSA) <Tony.Crocker@transamerica.com>

I think those of you with Emapwin can save Fred some work by using Display Mode, Local, then set latitude, longitude and altitude. Latitude and longitude are decimals, not minutes and seconds, and altitude is in meters. I think some earlier postings to SEMML have found Emapwin's accuracy to be comparable to Fred's posted data.

From: Bob Morris <morris@sce.carleton.ca>

EMAPWIN with the CIA map option is astounding! (IMO)

We should all be thankful for whoever wrote this program, and to the US government, for funding the CIA. Bob Morris

From: Thibault Mangold <tma@ifrance.com>

Hi all, You can also go to the site of the French "Bureau des Longitudes" which supplies a pages giving the local circumstances for any location from its coordinates. URL is <http://www.bdl.fr/cgi-bin/eclipses/soleclnew.pm> Sorry it's in french, but easy anyway: - select 'totale du 21 juin 2001' in the first combobox (labelled 'Sélectionner l'éclipse désirée' or

Select the desired eclipse - select 'autre lieu' in the second combobox (labelled 'Veuillez choisir un lieu géographique', or Select a location) - click 'Envoyer' (send) button - then in the right pane you can enter the coordinates, and even a name which is used in the displayed result (e.g. enter any words identifying the location) - click 'Envoyer' on the right pane, and you get the local circumstances.

Hope this will help at least some of you ... Thibault.

Here is an example of what you can get :

Lieu : Muvaradonha

Longitude : 31 d 9 ' " E

Latitude : 16 d 5 ' " S

Éclipse totale du 21 juin 2001

CLIPSE DE SOLEIL-Début de l'éclipse générale ou 1er contact: 11h 48m 54.6s P : 271° Z : 128°

Début de l'éclipse totale ou 2ème contact : 13h 13m 39.9s P : 87° Z : 322°

Maximum de l'éclipse : 13h 15m 23.4s Durée : 3m 26.1s

Obscurité : 100.0 % Magnitude : 1.0197 Hauteur du Soleil : 27°

Azimut du Soleil : 128°

Fin de l'éclipse totale ou 3ème contact : 13h 17m 6.1s P : 279° Z : 155°

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Fin de l'éclipse générale ou 4ème contact : 14h 29m 0.6s P : 94° Z : 340°

From: Chris O'Byrne <obyrne@iol.ie>

My Javascript Eclipse calculator at

<http://www.chris.obyrne.com/Eclipses/calculator.html>

makes a stab at correcting for the lunar limb profile. And, since the calculator is written in Javascript, you can save the page to your computer's hard drive, and use it while off-line. Chris.

From: gessner <gessner@easynet.fr>

Thank you Thibault for pointing at:

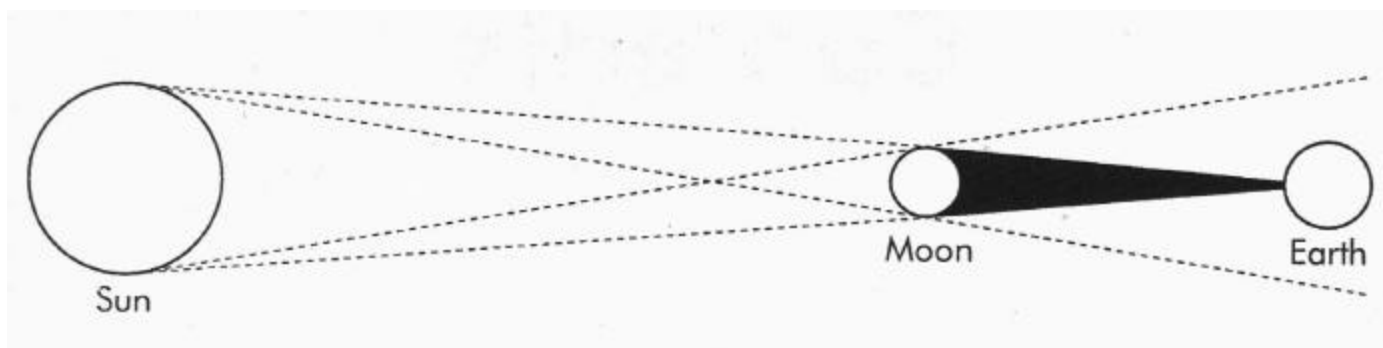
I used to consult the BDL-site on the French "Minitel" but this <http://www.bdl.fr> is much better. Best! Nicolas Gessner

From: yves.delaye <yves.delaye@wanadoo.fr>

Dear Fred, As you kinly propose to calculate local circumstances fot the TSE of June, could you please give me the hours for the followings site :

Hapa1	--ZWE	-14.5845	+028.0148	0500	000	+020	1
Hapa2	--ZWE	-14.5845	+027.5948	0500	000	+020	1
Hapa3	--ZWE	-14.5845	+028.0048	0500	000	+020	1
Hapa4	--ZWE	-14.5845	+028.0148	0500	000	+020	1
Hapa5	--ZWE	-14.5845	+028.0248	0500	000	+020	1
Hapa11	--ZWE	-14.5845	+028.0148	0500	000	+020	1
Hapa12	--ZWE	-14.5645	+028.0148	0500	000	+020	1
Hapa13	--ZWE	-14.5745	+028.0148	0500	000	+020	1
Hapa14	--ZWE	-14.5945	+028.0148	0500	000	+020	1
Hapa15	--ZWE	-14.0045	+028.0148	0500	000	+020	1

Thank you very much. Truly yours. Yves DELAYE

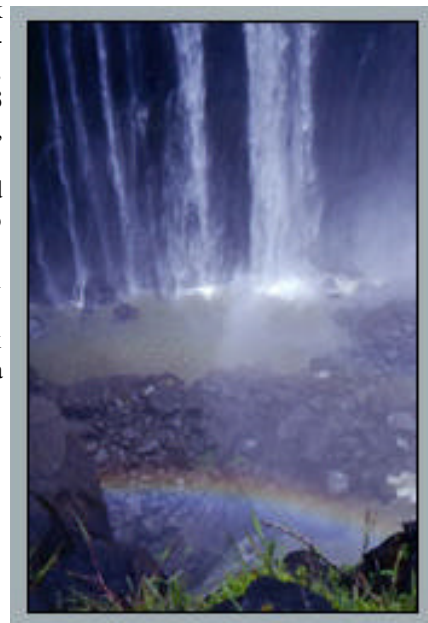


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From: Kidinvs@aol.com To: SOLARECLIPSES@aula.com Sent: Friday, April 06, 2001 2:10 PM Subject: [SE]

### Victoria Falls.....

After having been to Victoria Falls last year to plan this trip for my group, I think it would be a shame for anyone traveling to see the eclipse to miss this breathtaking attraction. The area has much to offer. It is beautiful, the Falls are spectacular, and there are enough "tourist" activities to do to keep you busy for at least 2-3 days. You can partake in short safaris, bungee jump into the falls (in my next life), go canoeing, white water rafting, hiking..... The area is beautiful, and the locals are, for the most part, kind and helpful. Beware of the street vendors in town, and at the falls, for they will try to get you to spend more money than you may wish to for sodas, and curios....and bring LOTS of film. I would also recommend the BOMA restaurant for dinner if you are there, located by the Victoria Falls Safari Lodge, where you will be able to feast on a wonderful buffet, that will include various game meats and even worms, and maybe termites if you are lucky (I took a pass on those dishes). Look for me there June 13th-19th. I will be at the Victoria Falls Safari Lodge, hopefully drinking "Corona" beer at the bar. Eric Brown  
[www.eclipsesafaris.com](http://www.eclipsesafaris.com)



# ECLIPSE

## SHADES



Joanne & Patrick

### *Solar Eclipse Mailing List*



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[MrEclipse.com](http://www.MrEclipse.com)

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## Friday the 13th Solar Eclipses

### Friday the 13th Solar Eclipses

Believe it or not, the next Solar Eclipse on a Friday the 13th is in July 2018.

The last solar eclipse on a Friday the 13th was in December 1974. Both are partial solar eclipses.

There are 24 Solar Eclipses on a Friday the 13th between 0 and year 3000. Of these, there are 13 partial solar eclipses, 9 annular eclipses and 2 total solar eclipses.

In January there are 2, February zero, March 2, April 3, May 1, June 2, July 3, August 4, September 2, October 2, November zero and December 3 solar eclipses on a Friday the 13th between 0 and 3000.

Of all solar eclipses on the 13th, in the month December, and between 0 and 3000, there are 3 successive on a Friday. Of all solar eclipses

on the 13th, in the month May, there are 5 successive on a Sunday.

In October there are 26 solar eclipses on a 13th, but only 2 are on a Friday. The most odd on a Friday the 13th is the solar eclipse of 13.03.313 which is an annular eclipse of maximum 6m09s and visible in Mexico and south North America.

And by the way, the two total solar eclipses on a Friday the 13th are in June 1760, visible in north Africa and Asia with a maximum duration of 5m27s and in June 2132, visible in Central America and small

part of Africa with a maximum duration of 6m55s.

For those who do believe in bad luck, none of Saros 145 (of 11 August 1999) does have a solar eclipse on a Friday the 13th.

Good luck to all of you.

